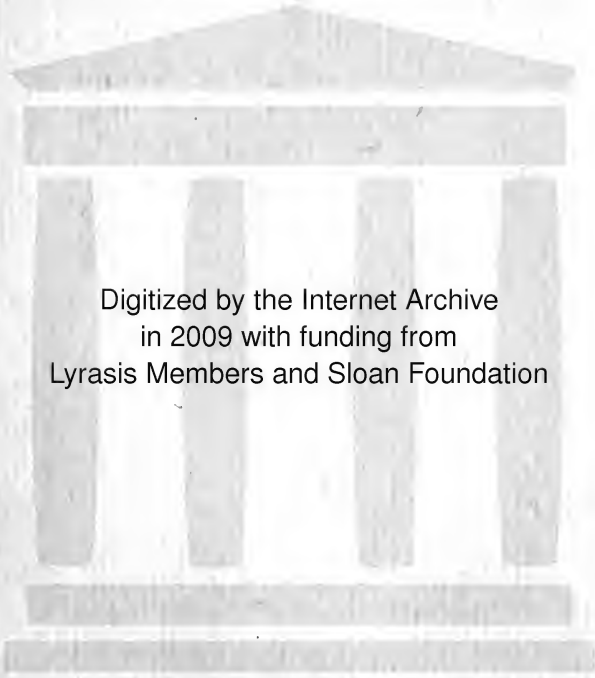

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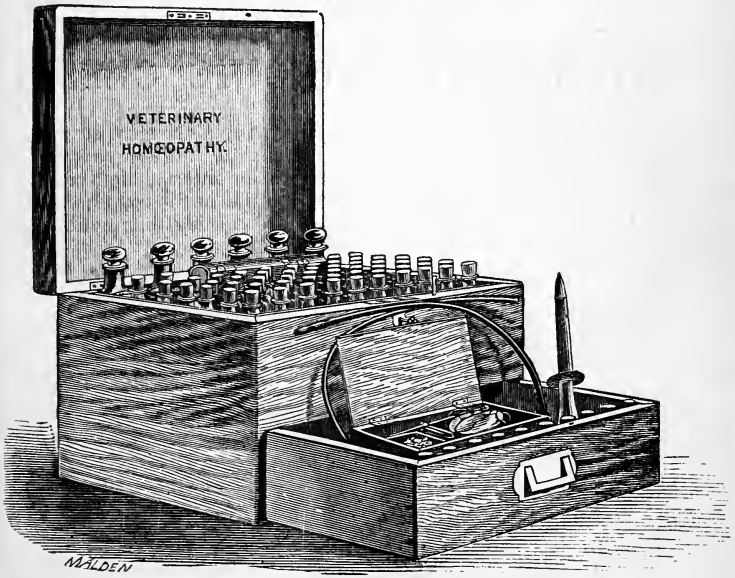

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HORSES ILL AND WELL:

HOMŒOPATHIC TREATMENT

OF

DISEASES AND INJURIES

AND

HINTS ON FEEDING, GROOMING, CONDITIONING, NURSING, HORSE-BUYING, &c.

BY

JAMES MOORE, M.R.C.V.S.,

AUTHOR OF "OUTLINES OF VETERINARY HOMŒOPATHY," "HANDY BOOK OF VETERINARY HOMŒOPATHY," AND NUMEROUS OTHER WORKS.

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PREFACE.

The author has aimed to write a compact treatise on the most frequent diseases of the horse, and their homœopathic treatment; and on the general management of this animal, in health and out of health. He has purposely confined himself to practical matters, and has said his say in the fewest and plainest words possible. In this way he thinks he has been able to bring within a small compass much valuable information how to get an ill horse well, and how to keep a well horse from falling ill. His opinions on these points are entitled to such weight as may be due to the matured experience of many years' active practice.

The remarks on horse-buying, suggested by the author's lengthened observations on this intricate subject, may put intending purchasers on their guard, and may save much heartburning and serious loss.

11 Upper Berkeley Street, Portman Square, London,
1*st January* 1873.

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INTRODUCTORY REMARKS.

I.—Examination of the Patient.

This is the first thing to do when an animal is ill. The symptoms which it presents must be minutely inquired into, for two purposes: firstly, to determine the seat and nature of the disease; and, secondly, to obtain indications for the selection of the right remedy. Attention to the following points will be of service:—

1. The Organs of Circulation.

(1.) The heart should be examined, by the hand, ear, or stethoscope being placed on the left side, behind the elbow-joint, to ascertain the force and rhythm of its action, and the character of its sounds, whether natural or unnatural.

(2.) Important information is gained by learning the state of the pulse,—whether regular or irregular, soft or hard, frequent or slow, &c.

The horse's pulse is best felt where an artery passes over the edge of the lower jaw, about three inches from the angle of that bone; it may also be felt at the inner side of the leg near the elbow-joint.

The beats per minute of the pulse are, on an average, in health and adult life, in the horse 36 to 40—in the ass and mule, 46.

It must not be forgotten, however, that the pulse varies somewhat from the healthy standard, under the influence of various circumstances, including age, size, temperament, breed, mode of feeding, &c.

2. The Respiratory System.

(1.) Ascertain if the nose is hot or cold; if there is sneezing, or offensive smell, or indications of polypoid growths or foreign bodies in the nostrils; if there is discharge—its character, whether watery, gluey, mattery, or bloody; if ulcers can be seen on the nasal membrane.

(2.) The character of the breathing,—frequent, difficult, painful, laboured, &c.

In a healthy horse, in complete rest, the frequency of breathing is *nearly* in the proportion of one act of breathing to four beats of the pulse.

There are, taking an average, ten acts of respiration in the minute.

(3.) If the expectoration, when there is any, is scanty or abundant; mucus or pus, or both; if expelled easily, or with much coughing.

(4.) If the cough is rare or frequent, painful, hoarse, croupy, barking, dry or moist, recent or chronic.

(5.) If both sides of the chest expand equally during breathing, or if one side expands more than the other; if pressure causes pain, flinching, and grunting.

(6.) If the sound is clear or dull when the lungs are percussed; if dull, noting the position.

(7.) If, on listening to the chest, the sounds attendant on respiration are natural or morbid; if the latter, ascertaining their character, and marking their site.

3. The Digestive System.

(1.) If the teeth are all, or only in part, cut; rotten, broken, worn down, loose, black, incrusted with tartar, irregular, &c.

(2.) If the tongue is bitten, swollen, inflamed, cut or paralyzed on one side; if furred; moist or dry; or altered in colour; or covered with vesicles or ulcers.

(3.) If the mouth is hot and dry, or cool and moist; if the breath is offensive, or not; if the mucous membrane is inflamed on the gums.

(4.) If swallowing is difficult or painful, or attended with choking; examining the throat externally for enlarged glands, &c.

(5.) If the stomach is disordered, as indicated by the appetite, thirst, &c.

(6.) The size of the belly; whether hard, or soft, or painful; dull or clear when percussed, or fluctuating when tapped; containing tumours or foreign bodies.

(7.) If there is diarrhœa, dysentery, constipation; the character of the expelled excretions, as to colour, consistence, quantity.

4. Genito-Urinary System.

(1.) The functions of the uterus; discharges from, or tumours connected with it.

(2.) The state of the vagina; if the seat of polypus, ulceration, discharge, or injury.

(3.) If the milk-glands or teats are tender, swollen, hard, cancerous, inflamed, ulcerated.

(4.) If the penis or prepuce is inflamed or ulcerated; or the seat of fungus growths, stones, &c.

(5.) Note the way in which urine is voided, and whether there is, or is not, a discharge of blood. In certain cases,

the urine should be submitted to chemical analysis, and microscopical examination.

5. The Integumentary System.

(1.) The skin, whether blotched, or mangy, or otherwise diseased; if the disease is partial or universal; the seat of morbid growth, dropsy, &c.; if hot or cold.

(2.) The state of the feet and shoes.

6. The Nervous System.

(1.) The shape and size of the head; whether the scalp is injured, or the skull fractured.

(2.) Insensibility or profound coma.

(3.) If the special senses of sight, hearing, &c., are diminished or lost; noting at the same time the condition and colour of the eye.

(4.) If there are convulsions, trembling, rigidity, palsy, or any peculiarity of movement when walking, such as avoiding or stumbling over obstacles in the way, or turning round and round.

It would be easy to enlarge the objective symptoms of disease, but the above may prove sufficient as finger-posts in aid of practical observation and accurate diagnosis. They will also assist those who reside abroad and in country districts far removed from veterinary aid, to describe symptoms by letter, with some approach to completeness and precision.

II.—How to Select the Remedies.

The symptoms having been ascertained, and, for the sake of reference, instruction, or publication, noted down from day to day, the next step is to select the proper remedy for the disease. Under the "treatment" of each malady, a few remedies are given, with certain symptoms attached to each.

That medicine, or those medicines, are to be given whose symptoms correspond the most exactly with those of the disease. For instance, if the disease should be influenza, *Aconite* is to be given when the symptoms recorded in connexion with it are present in the patient; and *Belladonna*, when the symptoms recorded after it are present. Should the symptoms of both these medicines be present in the same case, then both medicines should be given, not mixed, but separately and in alternation. These instructions are applicable to every other disease. I may here remark that *all* the appropriate remedies are not mentioned, but only those that are generally useful in ordinary cases.

III.—The Remedies.

The medicines prescribed in this work, and used in my practice, are *internal* and *external*.

The internal are in two forms:—

(1.) *Tinctures*, or alcoholic solutions of the remedy, varying in the dilution, usually the first decimal. In exceptional cases, the use of strong tinctures may be called for.

(2.) *Triturations*, in which the crude drug is minutely subdivided, by being rubbed up with a non-medicinal substance in certain fixed proportions. These are used less than tinctures.

For the lists of the internal remedies and external applications, refer to the "Materia Medica" at the end.

IV.—What Dose to Give.

The following directions on this point apply to all the internal medicines mentioned in this work, and should be followed out, except when the dose is specially stated under the "treatment."

The following is the average dose for each of the animals

named :—Horse, 10 drops; pony, foal, ass, and mule, 5 to 7 drops.

V.—Administration.

In order to do away with the trouble and inconvenience of having to drop *each* dose when it is required, the best plan is to mix enough for one or two days. For instance, drop 60 drops of the tincture into a *perfectly clean bottle*, add 6 wineglassfuls of pure cold water, and cork up. Of this mixture give a wineglassful, by means of a clean horn,* as frequently as may be required. Two medicines must never be mixed together.

The triturations—the doses of which are stated in the body of the work—are given in a handful of bran mash ; or, when it can be managed, dry on the tongue.

VI.—How Often to Give the Dose.

In acute cases, such as inflammation of the lungs, or in such as are attended with pain, or are evidently attended with great danger unless speedily checked, the medicine, or medicines, should be given frequently—every quarter of an hour, half-hour, hour, or every two hours, according to the violence of the symptoms. When the disease is within the remedial power of medicine, and when the remedy is adapted to the disease, improvement will set in, in a majority of cases, after a very few doses. Then it follows that the medicine, or medicines, must be given less frequently than before.

In old-standing cases, or in chronic diseases, the medicine may be given two, three, or four times a-day, according to circumstances.

* Small horns are specially made for homœopathic medicines.

VII.—Alternation of Medicines.

When two medicines are required to meet all the symptoms, each dose of them is to be given alternately; for instance, if *Aconite* and *Bryonia* are both indicated, and if the severity of the disease necessitates their administration every hour, *A.* is to be given, say at the even hours, 2, 4, 6; and *B.* at the odd hours, 3, 5, 7, &c. And so with the others.

The too common practice of mixing several different drugs together, is entirely contrary to homœopathy, because it is impossible to tell which ingredient in the compound is the curative or injurious agent. Even the alternation of two medicines should be avoided as far as possible. In a large proportion of cases it will not be necessary to give more than one remedy at a time.

When two medicines are given in turn, it is indispensable to use one horn for each, and never one for both.

CHAPTER I.

WOUNDS AND INJURIES.

1. Wounds.

The first thing to do is to stop bleeding by exposing the wound to the atmosphere, by pressure with the finger, or a compress of lint bound down by a bandage, by the application of cold water, &c. These means will always succeed, unless the hæmorrhage proceed from a wounded artery of considerable size, which is known by the blood spouting out with each heart beat. In such a case as this, firm and constant pressure must be used till both the cut ends are tied with silk thread.

The second thing to do is, to remove all foreign bodies from the wound, such as clots of blood, dirt, splinters, thorns, by means of the fingers, or forceps, or affusion with water. No wound will heal whilst these substances remain in it.

In the third place, the sides of a flesh wound should be brought together and kept there. The hair should be first closely clipped away from the skin near the edges of the wound. Pass a strong needle, armed with silk or hempen thread previously well waxed, through one side of the wound, from without inwards, then through the opposite point of the other side from within outwards. The thread is then to be tied, without unduly straining the parts, and the ends clipped closely off. Other stitches are to be put in in the same

manner, at about the distance of an inch, until the whole extent of the wound is accurately sewn up. A piece of lint, saturated with *Arnica Lotion*,* and constantly kept moist, may then be placed over the wound and kept there by a bandage. In all severe injuries, give ten drops of *Arnica* every three or four hours. In flesh wounds, with tearing and loss of substance, as well as a pure cut, apply or inject *Calendula Lotion*.* In deep wounds, the lotion must be injected. The stitches should be removed as soon as the sides of the wound are firmly adherent, and also when the wound becomes inflamed. To keep down "proud flesh," apply *Sanguinaria* once or twice a-day. If the discharge is thin and foul, give *Mercurius*, in 10-drop doses three times a-day. To keep off maggots, dress with tar.

---

2. Broken Knees.

Injuries to the knees may be grouped into three classes :—

1. Those which consist of simple bruises, without perforation of the skin. The knee is hot, painful, and swollen; some hair is removed, and the skin somewhat grazed. 2. Those in which the skin is cut through, torn, and jagged, and the tissues underneath more or less injured. 3. Those in which the knee is cut, bruised, lacerated, and pulpified, and the knee-joint open into as well. This last accident is known by the escape of clear fluid, like white of egg. The injury is often so severe as to cause death, or to necessitate the destruction of the animal.

Treatment.—This consists, in the first class of cases, in washing the knee to remove dirt, and in frequently applying *Arnica Lotion*.* In the second class, wash to remove dirt and blood, adjust the cut and torn skin as accurately as pos-

* See list of local applications.

sible, and apply the same lotion. Give internally ten drops of *Arnica* three times a-day, and *Aconite* in the same way if there is any feverishness. In severe injuries some inflammation will generally arise in the injured knee; the tissues ground down to a pulp by the force of the fall will slough off; and the wound will heal from the bottom, leaving, necessarily, a permanent blemish of greater or less extent. Here, hot fomentations and linseed poultices, medicated with *Calendula Lotion* * are required. When the inflammation in the wound is fairly gone, nothing more is required but this last lotion. When the knee-joint is open, treat as directed below.

---

3. Open Joint.

This serious accident most frequently befalls the knee, hock, stifle, and pastern joints, and is caused by falls, kicks, stabs with a nail or other penetrating body, &c.

It is characterized by a flow of synovia (joint-oil) through the wound. This fluid in appearance and feel is not unlike white of egg. Severe pain, and more or less irritative fever, varying with the size of the wound, and the importance of the joint injured, supervene. If, as sometimes happens, the interior of the joint becomes severely inflamed, the horse may die, or he may have to be destroyed; or tetanus may ensue.

Treatment.—The first bar to recovery lies in the impossibility of keeping a horse quiet, and, therefore, in keeping the joint perfectly motionless—rest being, in such cases, of incalculable aid; and the second lies in the condition of the wound itself, which cannot close and heal up, so long as a fluid is constantly running through its sides. When the wound is a large one, or when it implicates a large joint,

* See list of local applications.

such as the stifle, the horse must be slung. If there is much pain and feverishness, give 10 drops of *Aconite* every three hours; if not, *Arnica* in the same way. When the flow of joint-oil is considerable, gave *Silicea* in the same doses. According to my experience the best local application, one that is absolutely indispensable, is fresh *slaked lime*, very finely powdered. Lift some of it on the handle-end of a spoon, and apply it directly to the wound at the point where the fluid is escaping, and press it on with slight force. One attendant must wait on the horse during the day, another during the night, and *whenever* any oozing is seen a fresh application of the powder must be made at the point of issue. The lime and the oil form a thick, hard, adhesive crust, which, in course of time, if assiduously added to, stops the running, and allows the wound to close. None of this crust should be removed until the discharge is completely arrested, but the fresh applications must be made on the top of the old. From a considerable experience of this treatment, I can strongly recommend it. Even very bad cases should not be given up. The great point is, the repeated applications night and day whenever the oil makes its appearance. *Silicea* should be continued from first to last; but alone it can do but little.

In opened knee-joint, it is possible to keep the leg in comparative rest, by fixing on a gutta-percha splint, four inches broad and twelve long. Dip it in hot water to soften it; then fit it to the inequalities of the back of the leg, and secure it by a bandage encircling the leg above and below the knee.

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4. Poll-Evil.

This disease, as the name implies, is situated at the juncture of the neck with the skull, which are connected together

by a strong elastic ligament, commonly called the *pack-wax*. Poll-evil is at first merely a bruise, inflicted by the horse striking the top of his head against a doorway, or the top of a low-roofed stable; often, it is to be feared, the result of a brutal driver hitting that part with a stick, or the butt-end of a whip.

The seat of injury is very tender, hot, and swollen; the slightest touch causes the horse to flinch, and he is very reluctant to move it, and may be seen hanging his head, resting on the manger. If the case be neglected, the appetite fails, there is evidently greater pain, and the tissues under and about the pack-wax become inflamed. Matter soon forms, and, as there is no easy vent for it through such resisting structures to the skin, it burrows deeply and widely in all directions amongst the ligaments, and may even set up disease in the bones themselves. It may eventually, if let alone, come to the surface and the Abscess burst, to the animal's great relief.

Treatment.—In the first instance, apply three or four folds of cotton kept constantly damp with *Arnica Lotion*,* giving at the same time *Arnica* and *Belladonna*, 10-drop doses, every three hours alternately. The horse should rest, or, if this is impracticable, the head-collar should be eased in its bearings on the poll, and the driver should take care not to jerk the head about. Night and morning, the part should be thoroughly fomented with hot water. If these means should fail, it may be assumed that the formation of matter cannot be prevented, and the next step is to make a free incision into the abscess, so as to allow the matter to escape easily, and to make an independent opening at the lowest part. If the matter has already burrowed, the channels which it has made are called Fistula, or, in farriers' language, *pipes*. These also must be laid open with the knife. Then place dossils of lint in the lips of the wounds

* See list of local applications.

thus made so that they may not close too soon. When matter is formed, and when it is discharging freely, give 10 drops of *Hepar sulphuris* four times a-day; and, in chronic cases, when it is desirable to quicken the healing process, give *Silicea* in the same way.

As a local application for fistula, under whatever circumstances and in whatever region they may arise, inject *Mercurius corrosivus Lotion*,* two or three times a-day, stopping up the counter-opening with the point of the finger, during the process, in order that the fluid may permeate through devious ways. Diseased bone should be scraped. When the bones are diseased, the cure is always tedious, and recovery may take place with a permanent adhesion which prevents free movement of the head.

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5. Fistulous Withers—Bruised Back.

Beginning with a bruise from the pressure of an ill-fitting saddle, and ending in abscess and fistula, this injury presents exactly the same general symptoms as poll-evil, runs the same course, and requires precisely the same treatment.

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6. Bony Enlargements.

Nodes.—A kick, or other blow, on the shank bone of a hind or a fore leg, gives rise to severe pain, heat, and swelling. The membrane (periosteum) covering the bone inflames and thickens, and a deposit of osseous matter takes place. Constitutional causes, apart from any injury, may likewise induce such swellings.

Bone-Spavin.—This is a small, hard swelling caused by

* See list of local applications.

bony deposit, situated at the lower part of the hock at the inner side. Usually, in the earlier stage at least, there is more or less occasional lameness, as well as tenderness to the touch, heat, and swelling. At a later period, it involves the hinge-like joint of the hock, and interferes with its free movement. In some chronic cases, the lameness attending spavin disappears during exercise, from a special part of the articulation being affected, whilst free movement remains between the tibia and astragalus. A peculiar make of hock, and hereditary predisposition, favour the development of spavin; whilst it is caused in other animals without any such liability by overwork and excessive strain upon the joint, especially in early life.

Except in very confirmed cases, it is possible to lessen spavin and its accompanying lameness without resorting to painful or disfiguring measures, by remedies mentioned below, which I have often tried and found successful.

Splint.—The bony tumour thus named is between the shank bone and the splint bone, which is situated alongside the shank bone between the knee and fetlock, and it usually appears on the inside of a fore-leg. Sometimes there is a splint on the outside. According to its position, size, and extent, it may or may not cause lameness. If it be situated near the knee-joint, or interfere with the free movement of a sinew, it causes lameness. It then, and only then, constitutes legal unsoundness.

Side-Bone.—This consists of a deposit of bony matter into the side cartilages, at the back part and outside or inside of the coronet, just above the hoof. It is usually confined to the fore-legs.

Ring-Bone.—This is a bony enlargement on the pastern bone, immediately above the coronet, extending in some cases so much as to produce anchylosis of the pastern, or coffin joints—a condition in which the opposed surfaces of the articulation are surrounded and immovably locked to-

gether by bony deposits. Ring-bone is most frequent on the hind-leg, and there is usually "side-bone" as well. Ring-bone and side-bone, no matter how small, and whether they cause lameness or not, constitute unsoundness in the law's eye.

Treatment.—The treatment of all bony enlargements is the same. The frequent application of *Arnica Lotion*,* and the internal administration of 10 drops of *Arnica* three times a-day, is the proper treatment for such swellings soon after the infliction of the injury. When the swelling is hard to the touch and bony in nature, give 10 drops of *Mercurius corrosivus* three times a-day, and rub in, night and morning, *Mercurius corrosivus Lotion* * until the skin becomes tender and scurfy; then desist for two or three days, and repeat as before—continuing in this manner until the enlargement disappears.

7. Bursal Enlargements.

A bursa is a small bag containing a fluid, and the use of it is to prevent friction where a tendon runs upon a bone. When a horse is overworked, too early worked, or the tendon is sprained, or the bursa itself directly injured by a blow or kick, slight inflammation arises, the part becomes hot and tender, and a swelling, sometimes small, sometimes large, arises in consequence of increased secretion of serum into the sac. There are several special varieties, including the following:—

Thorough-Pin, which is situated on both sides of the hock, in the form of a round swelling, often of considerable size, but seldom causing lameness.

Wind-Galls, which are found above and at the sides of the fetlock joint. Except when large or hard, they do not

* See list of local applications.

cause stiff action or lameness, but they are unsightly, and ought to be attended to.

Bog-Spavin is a bursal swelling, situated inside the bend of the hock, often of considerable size. This swelling if large obstructs the flow of blood from a vein which passes over the bursa—the vein is distended with blood—and the swelling thus caused is named *Blood-Spavin.*

Treatment.—At first, rub the part thoroughly three times a-day with *Arnica Lotion,** and give 10 drops of *Arnica* thrice daily. At a later period, when there is more or less copious effusion, use *Rhus Lotion,** and *Rhus*, in the same way. Should this fail, which it rarely does, or if the swelling be tense or callous, use *Mercurius corrosivus Lotion,** and *Mer. cor.* inwardly as directed at page 23.

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8. Capped Hock, &c.

Capped Hock is a swelling on the point of the hock, best seen when looked at sideways, caused generally by the horse kicking in harness, or in the stable, or by any other mode of injury. It may be a true bursal enlargement; in which case the swelling is at the sides of the point of the hock; most frequently it consists of effusion of a serous fluid under the skin, with thickening of the skin itself. The swelling often becomes hard and difficult to remove.

Capped Elbow.—This enlargement is of the same nature as capped hock, and is caused by the heel of the shoe injuring the point of the elbow when the horse lies down. Sometimes it ends in Abscess.

In treatment, rub in *Arnica Lotion** three times a-day, and give *Arnica*, 10 drops thrice daily. For subsequent hardening, use *Mercurius corrosivus Lotion,** and *Mer. cor.* thrice a-day.

* See list of local applications.

9. Sprains.

A sprain may be defined to be an injury of the ligaments and adjacent structures of a joint, or of a single tendon, the result of over-extension. A sprain may vary in severity and consequences, from a slight strain upon these structures requiring little or no treatment, up to a fatal or irremediable lesion. Local pain and swelling, with lameness or inability to move, and perhaps some degree of feverish excitement, are the chief general symptoms.

The following are the principal individual accidents of this kind:—

Sprain of the Neck.—This occurs when a horse falls upon his head, as in hunting. There may be displacement of bones, with twisting of the head and neck; or concussion or laceration of the spinal cord, attended or followed by hopeless paralysis; or simple sprain of the tendinous and ligamentous structures.

Sprain of the Back occurs when a horse slips in the field, or on ice, and attempts to recover himself; or when the hind-feet slip backwards, as in jumping. Severe injuries in this quarter may involve important parts and be beyond the reach of art; or the sprain may not be observable till the animal has rested.

Sprain of the Shoulder occurs from a slip or fall, and is characterized by reluctance to move the limb, extension of the leg forward, dragging the toe along the ground and slightly swinging it round when walking, with local tenderness under pressure, and usually with some heat and swelling. When the lame leg is raised well up, and pulled out in front of the horse in a straight line, it is evident that more or less pain is caused.

Sprain of the Hip is known by lameness, difficulty in moving the leg forwards, and local heat, tenderness, and swelling.

Sprain of the Stifle is known by dragging of the leg, and the same local symptoms as the last. The patella—or bone in front of the stifle joint—may be dislocated, in which case the leg is dragged along, stiff, and immovable. Drawing the leg forcibly forwards and pressing the bone into its place, will remedy this displacement. Spasm, or cramp of the leg, gives rise to similar symptoms; it comes and goes suddenly.

Curb is an enlargement at the back of the hock, about three or four inches below the point of the hock, and consists of sprain, followed by swelling and thickening of the ligament which blinds the os calcis and metatarsal bones together. It is seen at a glance, by looking at the hock from the side. A horse galloping over stiff ground, or put to a sudden spring, as in a start or jump, may "throw out" a curb. Young horses are especially the subjects of it. Horses are called *cow-hocked*, or *curby-hocked*, when the joint is malformed in such a manner as to render them more than ordinarily liable to curb from the ligament being kept constantly on the stretch. A horse with curb is unsound, but a curby-hocked horse not lame at the time of sale is legally sound. A horse that throws out a curb even within an hour after sale cannot be returned to the vendor.

Sprain of the Back Tendons, a frequent accident to the fore-leg, is attended with sudden lameness at the time of injury, or the lameness is perceptible only after the horse has rested. There is pain, heat, and swelling in some part of the tendon, between the pastern and knee. The horse rests his leg on the toe, and is afraid to put the foot down flat. In bad or neglected cases, the condition known as *thickening of the back sinews*, remains.

Broken Down expresses rupture of the suspensory ligament and of the perforating flexor of the foot—a serious accident, which occurs suddenly to one leg, rarely to both, when the horse is galloping at full speed. He stops like a

shot, or falls down—hence the name—and we find him resting on the fetlock, with the toe turned up and the sole of the foot forwards.

Treatment.—All the above varieties of sprain demand absolute rest, at least until pain and swelling are markedly less, and the lameness trivial. Even then work is out of the question—gentle exercise is alone advisable. On this point great care and judgment are required. In sprain of the back tendon a high-heeled shoe should be put on, and kept on until it is no longer needed.

In the first stage of sprains, give *Arnica*, in 10-drop doses, every three, four, six, or eight hours, according to the severity of the injury, increasing the interval between the doses with the improvement. The best application is *Arnica Lotion*,* which should be well rubbed into the injured part at least three times a-day, or, when it can be done, applied constantly by wetting a piece of lint or cotton, covered with a dry cloth. In sprains of the leg, a bandage damped with the lotion, and kept damp, should be wrapped round. In the majority of cases this treatment will be successful. But if some swelling should still remain, substitute *Rhus Lotion*,* and *Rhus*, using the former and giving the latter as directed above for *Arnica*. In chronic thickening of tendons, or the sheaths of tendons, or of the structures around a joint, consequent on severe or neglected sprains, have recourse to *Mercurius corrosivus Lotion*,* and *Merc. cor.* as directed at page 23.

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10. Staking.

Sometimes the belly is wounded in leaping fences or gates. The depth of the injury is found out by making search with the finger. The skin may be whole, but the muscle torn underneath, and the bowel projecting

* See list of local applications.

into the sac thus formed. Bandages, and pressure with a well-fitting pad, are required. Sometimes the stake has penetrated into the belly, and a larger or smaller portion of gut protrudes. When this occurs the bowel must be carefully cleansed with warm water and replaced, before the animal moves another step, by gentle pressure and kneading, the lips of the wound drawn together and secured with pins and tow, a pad placed on the injured part, and the whole kept in place by a firm bandage round the body. But if the gut itself should be cut through, the wound must be sewn up with catgut ligatures before the protrusion is replaced. When this cannot be done at once, a pad and bandage should be put on till proper help arrives. There is great danger of inflammation afterwards; to avert this, give *Aconite* and *Arnica* in 10-drop doses every two hours alternately, keep the patient as quiet as possible, feed sparingly on soft food, and apply *Arnica Lotion** to the injury.

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11. Falling.

When a saddle horse falls down through age, sickness, or exhaustion, and cannot rise by his own efforts, he should be helped up. Do not stand in front or on the feet side, but at the back; then get hold of the reins, and when the horse raises his head, keep the head fixed, and thus make it a point on which the muscles may act in raising the entire body. Place the other hand on the shoulder or withers, and push the body over the legs. To free a fallen horse from traces and shafts, the first thing is to keep the head down, unloose the harness, take the traces off the horse or the bar, back the carriage, and then support the head as before. If in double harness, first remove the up horse, especially if the legs are stretched towards the latter. When the horse is up, calm and stroke him for a few

* See list of local applications.

minutes; if able to proceed, start slowly, if not, remove him to the stable, wash the injury with warm water, and treat according to circumstances as directed in this chapter.

12. Fainting in the Collar.

Horses affected in wind, or worked fast, especially in hot sultry weather, or whose heads are touched up with the bearing rein, or who are subject to rush of blood to the head, are apt to swoon in harness—that is, suddenly stagger, swing from one side to the other, lie on the pole, or drop down. Generally recovery is speedy. The bearing rein should be instantly slackened, and a small quantity of water given, and applied to the head and face. See "Megrims."

13. Choking in the Collar.

Draught horses, pulling dead up hill, sometimes choke by the collar pressing on the windpipe, especially when food is given during work and a morsel of food is arrested in the gullet by the severe collar pressure. They may fall instantly, or stagger first. The collar should be pulled forward, or the load backwards, the wheels being set across the hill. No food should be given to horses while yoked. See "Choking."

14. Fractures.

The pastern, shank, and forearm, are not uncommonly broken. The animal tries to keep his feet, and then drops and cannot get up. The broken ends will unite again in time, if the horse is worth keeping, as in the case of stallions, brood mares, or favourites; but stiffness or lameness usually result, or the animal is fit for only partial work.

CHAPTER II.

DISEASES OF THE FEET.

Corns.—The bruise thus named is almost always found at the inner heel of a fore-foot. The usual cause is the undue pressure of the heel of the shoe on the sensitive part, causing effusion of blood and the dark red appearance seen when the corn is pared out. Flat feet and those with low weak heels are most prone to corns.

The horn at the bruised part should be pared away carefully, a piece of cotton wool soaked in *Arnica Tincture** put on, and the heel of the shoe eased. In severe cases with much lameness, the foot should be fomented in a bucketful of hot water, and afterwards put into a bran poultice. The latter are especially required so long as there is inflammation and discharge. In some cases a leather sole, or bar shoe with tar dressings, are necessary. In bad or neglected cases a quittor may form, for the treatment of which refer to what follows (page 34).

Sandcrack.—This is a fissure of the hoof, generally at the inner quarter of a fore-foot, and in front of a hind one. Its causes are dryness and brittleness of the horn. A false step may produce it in an instant. If of old date, evidences of paring and dressing may be discovered. It does not cause lameness unless it extends through the crust down to

* See list of local applications.

the sensitive parts. It constitutes unsoundness, but no horse can be returned for it, unless there is proof that it is not of recent origin. The foot must be poulticed for several days to remove dirt and soften the horn. Then the horn at the top of the fissure is to be removed as freely as may be judged necessary to allow the coronary band to secrete new horn properly. The fissure should then be filled with tar and tow, bound down with strong tape, and, if the horse must work, a shoe put on with the pressure off the crust under the crack. If there is much pain and lameness, continue poulticing, and dress with *Arnica Tincture.** Sprouts of proud flesh may be kept down by occasionally applying *Sanguinaria.*

False Quarter.—This results from wounds or disease of the coronary band, whereby the growth of the crust is rendered deficient and irregular, a fissure is formed, and more or less lameness ensues.

The treatment is essentially the same as for sandcrack.

Seedy Toe depends on softening and irritation between the crust and the laminæ, and separation between them. It may arise from chronic inflammatory action of the sensitive parts, or on dirt or gravel getting in at the edge of the sole.

Paring, proper shoeing, and plugging the excavation with tarred tow, are the main remedies.

Pricks.—The sensitive parts are often punctured by a nail in shoeing, or by picking up a nail in the stable or street. Remove the shoe, pare away the sole near the injured spot, until it yields to pressure; put on a fresh hot bran poultice night and morning, and fill the cavity with a bit of cotton wool dipped in *Arnica Tincture.* When the prick has been properly pared down upon, black matter comes out at once, and the worst is over. In neglected cases, the imprisoned matter makes its way to the coronet (see

* See list of local applications.

"QUITTOR"), or burrows under the sole, and thus causes much injury. A nail may penetrate at the side of the frog into the flexor tendon, or the coffin joint, and let out the joint oil. The treatment here is also to pare away horn to let the matter out, to poultice and apply *Arnica*, and afterwards to shoe with a leather sole, and perhaps a bar shoe. In severe cases, give 10 drops of *Arnica* four times a-day, along with *Aconite* in the same dose, alternately, if there is feverishness.

THRUSHES.—Here there is stinking discharge, scanty or copious, from the cleft or sides of the frog, especially in the hind-feet, caused by too moist stopping, or by standing in dung. In neglected cases, the mischief spreads to the entire frog, the heels and sole, and canker may be set up. The horse may drop lame, or fall, when the frog touches a stone. In simple cases, dry the part with tow, and then dress with pledgets of tow dipped in hot tar; in severe cases, first remove all the rotten horn from the frog, poultice if necessary, and then dress as above. Leather soles are sometimes required, especially for horses addicted to standing in their dung. Dick used to speak highly of calomel applications. *Arsenic* in 10-drop doses night and morning does good.

LAMINITIS, ACUTE FOUNDER, or inflammation of the foot, is caused by hard work and battering of the feet; standing in snow, and then the horse being put into a warm stable; standing for many hours, as on board ship; by local injuries; by the transference of disease from the lungs; by overloading the stomach, as in "acute indigestion," &c. In slight cases, the feet are hotter than they should be, and the animal, when made to walk, moves with evident pain and unwillingness. In severe cases, the affected foot or feet are very hot, and exquisitely sensitive when tapped. When the fore-feet are inflamed, the hind-legs are brought well forward under the belly, so as to take away the weight

of the body from the front. The arteries of the leg throb violently. The pulse is very high—up to even ninety or a hundred. Sometimes the muzzle rests on the diseased part, as if to show where the pain lies. The horse usually drops down from the excessive pain, and does not get up. In severe or neglected cases, the hoofs slough off, and death follows, or they are cast gradually, and grow again slowly; or the soles become deformed as in "pumiced foot."

No time should be lost in beginning treatment. The shoes should be removed, and the horse made to lie down, after Rarey's plan, by buckling up a fore-leg, &c. A thick layer of sawdust, overlaid with straw, should be put down. *Aconite Lotion*, soaked on cloths tied round the coronet, should be constantly applied. Give *Aconitum*, in 10-drop doses, every two, three, or four hours, according to the severity of the symptoms. Since I began homœopathic treatment, I have never had need to depart from these simple measures; all the cases have done well. Gruel, bran mashes, carrots, &c., are the best food at first.

Pumiced Foot.—This is one of the results of the disease just described. The sole is flat or convex—bulged downwards. The horse walks in a peculiar way and goes on his heels first. The foot curves towards the toe. Such feet get from bad to worse, and the horse is rendered more or less unserviceable. Rest, or slow work, and proper shoeing, are the only points of treatment.

Cutting and Brushing is the result of hitting a fetlock with the opposite foot. Some horses are so badly made in the legs that cutting is a matter of course. The use of a boot, and putting on a particular shaped shoe, known to most smiths, are preventives.

Speedy-cut occurs during fast action, usually in horses with ill-shaped legs, when the inside of the leg just below the knee is banged by the hoof or shoe of the opposite foot. A boot and special shoe may be required here also.

Over-reach is the consequence of hitting the heel of a fore-foot with the toe of the hind one. If neglected, it may end in quittor.

Tread is a bruise caused when one foot treads upon the coronet of another foot, as when the horse is turning or backing; or it may happen when one horse treads upon another. Sharpened shoes, in winter, often cause considerable injury in this way. Quittor may ensue.

In all the foregoing varieties of bruises, the horse should rest if possible. *Arnica Lotion** should be applied three or four times a-day, either by being put on with the hand, or by damping a bandage with it. Treads and over-reaches should be well fomented by placing the foot in a bucketful of water or in a bran poultice. After the fomentation, damp a piece of tow in *Arnica Lotion*, put it on the injured part, and fasten by a bandage. Keep the dressing constantly damp with the lotion, and renew the tow once a-day. If there is a mattery discharge subsequently, put on a bran poultice medicated with a wineglassful of *Calendula Lotion*,* and when the surface is clean dress with this last lotion, and secure the pledget of tow by means of a bandage.

Quittor is an abscess at the coronet resulting from injuries to the foot, such as corns, pricks in shoeing, or penetrating wounds produced by sharp bodies in general. In severe or neglected cases, inflammation arises at the injured part, and matter forms, which spreads in every direction between the bone and horn, and at last appears at the coronet above the heel. The same condition of the coronet may follow severe treads, or over-reaches. Before the gathering breaks, we observe a painful swelling at the coronet; when this breaks of itself, there is a discharge of matter from one or more holes. The essence of quittor consists in their being sinuses, or pipes, communicating with the original seat of injury and the surface of the skin. Such cases are

* See list of local applications.

usually attended with considerable pain and lameness, and, unless promptly and properly treated, lead to disease of the bone, or deformity of the foot.

Treatment.—If the cause be corns, or penetrating wounds of the sole of the foot, the horn must be pared in such a manner as to let the pent-up matter out. Then put the foot in a pail of hot water, and afterwards in a large bran poultice. This should also be done for the swelling at the coronet, which should be opened if necessary. In bad cases the horse should not work. The best local application is *Merc. cor. Lotion*,* injected three times a-day into the pipe at the opening on the coronet. If there is a second opening, stop it up during the injection with the point of the finger, so that the fluid may flow along the windings of the sinus.

If the foot is pricked in shoeing, or if bad shoeing has caused corns, a skilful farrier will know what to do.

Management of the Feet.

Picking.—This must be done as soon as the horse comes off work, to search for and remove nails, stones jammed between the frog and shoe, splinters of wood, &c. The mud and gravel must be picked and brushed away from the space between the shoe and the sole, especially in flat feet, or low weak heels. A picker should always be carried in the coachman's box, for use, if necessary, in the street.

Stopping.—A mixture of clay and cow-dung is perhaps as good material as most. It is neither too hard nor too soft. The feet of hacks, racers, and hunters may be stuffed with moss, or tow wetted. The latter answers well for weak, thrushy feet. Too much stopping produces thrushes and softness of the soles. Flat thin feet are injured by over

* See list of local applications.

stopping. On the other hand, neglect of stopping, especially in dry summer weather, leads to hardness of the sole, awkward action, and perhaps even lameness. Horses with concave soles, or high heels, or hot tender feet, should be stopped every night. Hard-worked harness horses should be stopped every other night in summer; less frequently in winter. Every foot should be stopped a few hours before shoeing.

Applications to the Crust.—Fish oil, or a mixture of equal parts of tar, oil, lard, and bee's wax, melted together, are useful ointments to the foot. When the foot is thin and the weather wet, they should be applied before work to prevent absorption of water, and thus to keep the horn firm and hard. On the other hand, when the weather is hot and dry and the horn hard, the hoofs should be saturated with water, and afterwards smeared with ointment to prevent evaporation of water. The hoofs of cart-horses are usefully and usually coated with tar at the time of shoeing.

Shoeing.—As a rule, a new set of shoes is required once a-month. Some horses require shoeing oftener, some go longer. In fast-growing hoof the shoes may need removing once a-fortnight. Attention should at once be paid to a started clench, or to cutting, or shifting of the shoe, loose or broken nails, &c. Over-paring and over-rasping the foot are too common faults, with the certain result of sooner or later seriously damaging that structure. Loose layers of horn on the sole should be taken off, but nothing more. Slicing away the frog is wrong; it should be left alone, or only the ragged parts detached, and that but sparingly. "Opening the heels" is another bad practice. The external surface of the crust should not be rasped above, but only below the nails. The toe, if growing too long, may be shortened with the rasp. A description of the special kinds of shoeing for deformed or diseased feet cannot be given in a short treatise like this; but in all cases an expert shoer should be

employed. As the author has a practical knowledge of the art of shoeing, he can advise on this point.

Forging, Clicking.—These names are given to the noise made by some horses through striking the toe of the hind shoe against that of the fore-foot during trotting. It mostly occurs in short-backed horses, and in young ones, badly handled or badly broken in. The prevention consists in shoeing the hind-feet with the toes overlapping the shoes, so that when horn strikes iron there is no sound. To improve the horse's action, he should be kept well together, and ridden or driven against the bit.

Leathers.—Flat soles, pumiced feet, or those with weak heels, require the defence from jar of leathers, with tar and tow dressing underneath. In some cases, a nicely applied layer of gutta-percha answers better. Horses addicted to standing in their dung, and having thrushes in the hind-feet therefrom, should have leather soles.

CHAPTER III.

DISEASES, ETC., OF THE TEETH.

1. The Teeth as Tests of Age.

In the foal the two middle incisors, or front teeth, of both jaws, are cut at birth, or they appear shortly afterwards. These are presently followed by three molars, or grinders, on each side of both jaws, and, at the sixth week, by two other incisors in each jaw. At about the ninth month, the corner incisors are cut. When a year old, the horse has therefore 12 molars and 12 incisors. From the first to the second year, the teeth already cut are in full use and wear, and two more molars on each side of both jaws appear in succession. At two years, there are therefore 12 incisors and 20 molars, all temporary teeth. Between the second and third year these teeth begin to fall out and give way to the permanent set, which appear in the same order as the first set. The two middle incisors in the upper and lower jaw are the first to be replaced by stronger and larger permanent incisors marked on the cutting surface by a deep dark hollow; from three to four, the next incisors above and below are replaced; and from four to five, the corner incisors—making in all 12 permanent incisors. By four and a half, the temporary molars have gradually given way to corresponding permanent molars, and the sixth and last molar, a permanent tooth, appears, as well as the four tusks,

or tushes, of the horse. At this period the full number of teeth are cut, viz., 36 in the horse, 40 in the mare; and at five they are all in full wear, and undergoing, especially the incisors, those changes which furnish the best evidence of the animal's age. At six, the lower middle incisors are without mark; at seven, the same change is found in the other incisors; and at eight, all the black marks are worn out, even in the corner incisors. At a later period, the incisors become triangular on their cutting surface, and stand out straighter from the jaws. The marks are retained longer on the upper incisors, but they are less reliable than those on the lower as indications of age. The tushes, too, at first small and sharp, gradually, as age advances, become longer, blunter, and yellower. In exceptional cases, one may meet with an old horse having a young mouth, as far as the shape and marks of the incisors are concerned, but the changes above described generally hold good. It is important not to mistake the temporary for the permanent teeth, otherwise a two-year-old may pass for a five-year-old, with a "green" buyer. The permanent teeth are larger and darker, and have a furrow down the centre on the outer surface.

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2. Irregularities of the Teeth.

One of the most common irregularities occurs during growth, when one incisor projects from the jaw instead of being side by side with the others. The term "buck" tooth is applied to this condition. The remedy is removal. In some cases a temporary tooth has to be drawn in order to make room for the proper placing of a permanent one.

A supernumerary tooth—"wolf's tooth"—sometimes appears in front of the molar set in either jaw; when it interferes with chewing, it should be extracted. An outgrowth of bony substance from a tooth has been met with, and should

be chipped off if it cause any inconvenience. The molars are often irregular. One, instead of coming through the ridge of the gum, may protrude through the roof of the mouth, and when long injure the tongue and prevent eating and chewing. From irregular wearing of the surface of the molars, the edges of these teeth become sharp and jagged, causing wounds of the inside of the cheek or tongue, and interfering with chewing. These sharp edges should be rasped down. Occasionally, the excessive growth of a molar leads to injury of the upper jaw, followed by inflammation and ulceration, with offensive discharge from the nose, swelling of the face, and impaired chewing. Such a tooth should be rasped down or drawn.

In rasping or drawing the teeth, instruments made for the purpose must be used, and a veterinary surgeon called in to handle them.

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3. Painful and Difficult Teething.

In some horses the process of teething gives rise generally to much disturbance, especially in the case of the tushes. There is a certain amount of feverishness, attended with refusal to eat, difficulty and pain in chewing, disorder of the bowels, and even colic, passage of uncrushed oats, irritating cough, loss of flesh and condition, &c. The gum is found to be hot, painful, and swollen.

Treatment.—Belladonna is the best remedy when the animal is feverish and suffers much pain, and when the gums are tender to the touch.

Calcarea carbonica is of use when the teeth are slow in appearing, as the result of constitutional weakness.

Dose.—*See page* 13.

There are cases where it is necessary to cut through the gum cross-wise over the tooth. Also, pull out loose or superfluous teeth.

4. Caries—Decayed Teeth.

This is indicated by a peculiarly offensive smell, by slavering, by swelling, redness and pain of the gum around the diseased tooth, and by a black spot or cavity in the tooth. There are fits of toothache. When the three last upper molars are decayed, and the gum inflames, the matter resulting therefrom may make its way into the maxillary sinuses, and thence flow through the nose, giving rise to much local disturbance, general irritative fever, most offensive stench, and presenting a condition which has often been mistaken for glanders. In some cases of decayed molars, in addition to other symptoms, one eye is inflamed and watery. Sometimes the abscess bursts on the surface, and then we have to deal with that troublesome state known as *Fistula of the face.* A diseased lower molar may set up inflammation of the lower jaw, with enlargement of the bone, and mattery discharge—a condition which I have seen more than once, and cured by the extraction of the offending tooth. The teeth should be carefully examined in all cases of pain and swelling of the bones of the face and jaws, particularly if accompanied by nasal discharge and imperfect chewing.

Treatment.—It is essential at once to extract diseased teeth, and if the contiguous bone is diseased to give *Silicea,* in 10-drop doses three times a-day. If matter has discharged on the skin, keep the part thoroughly clean by washing with warm water, and treat locally for fistula as directed in the remarks on that subject. (*See Index.*)

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5. General Symptoms of Diseased Teeth.

Diseased or irregular teeth cause some or all of the following symptoms:—The food is not chewed thoroughly, but, after having been partly ground down, is dropped out.

Horses "quid" their hay and bolt their corn, which is seen in the dung uncrushed. The result is that, partly from constant pain and partly from loss of nourishment, the animal gets dull, thin, and hide-bound, and then is apt to suffer from colic, or some other disease incited by its low condition. Some of the consequences of diseased teeth to the parts adjacent, in setting up irritation, inflammation, and nasal discharge, have been already referred to.

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6. Bishopping, &c.

Dishonest dealers sometimes try to make the horse appear younger or older than he is by altering the natural state of the teeth. To make an eight or nine year old horse appear seven, the corner teeth have a small cavity scooped out on the cutting surface, which is then darkened with caustic or the hot iron. To make him appear six, the next tooth on each side is operated on in the same way.

On the other hand, to make a three-year-old, for instance, pass for a four-year-old, the colt teeth that would naturally drop out shortly are drawn, and the horse teeth quickly fill up the vacancies.

These tricks can impose upon an inexperienced person only.

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7. Rasping the Teeth.

For the guidance of those who cannot obtain professional aid, the following remarks on this operation may prove useful.

The horse is first backed into a stall, and an assistant stands on the left side and pulls the tongue towards him, holding it down firmly. The groove of the tooth-rasp is then placed upon the outer edge of the upper molars of the right side, and worked backwards and forwards until the rough projections are smoothed down. The inner edges of the lower molars are next rasped in the same way. Then, the

assistant goes to the right side and pulls the tongue in that direction, whilst the operator rasps the left molars, beginning as before with the outer edge of the upper teeth, and finishing with the inner edge of the lower ones. The main precautions are, not to draw the tongue forwards violently or too far out; nor to carry the rasp backwards to an unnecessary extent.

CHAPTER IV.

DISEASES OF THE MOUTH.

1. Aphtha—Thrush.

Thrush is occasionally met with in the horse. It consists in an eruption of small vesicles on the mucous membrane lining the mouth. When the fluid in these vesicles is discharged, small ulcers are observed, and this ulcerated condition may be somewhat widely spread from the small ulcers running together. The lining of the mouth peels off, leaving below a tender surface, which prevents the animal from eating as usual. On examining the mouth, these appearances are observed on the tongue, lips, inside of the cheeks, and gums. Thrush is sometimes accompanied by strangles. It arises either from the local irritant action of improper food, or acrid plants, or as the result of constitutional disorder.

Treatment.—In all cases begin with *Kali chloricum.*

If, after giving this remedy for a few days, no improvement is manifest, substitue *Mercurius.*

Dose.—*See page* 13.

2. Inflammation of the Mouth and Tongue.

It has been known to follow the internal administration of turpentine in too large doses, and it occasionally arises from

other more obscure causes. The whole of the mouth is more or less affected with redness, pain, and swelling, and throughout the progress of the disease there is much febrile excitement. In course of time, the lining membrane of the mouth peels off, and the parts are left raw and sore, and extensive ulceration and even gangrene may result. There is copious discharge of mucus.

In some cases the tongue is more severely inflamed than the other parts of the mouth—then it is swollen and hangs out, and in bad cases, matter forms in it, or it is left hard, stiff, and enlarged. When the tongue is much swollen, swallowing is difficult, and the breathing so impeded as to threaten choking. Amongst the causes of inflamed tongue are, injuries in giving balls, the animal biting his tongue, bruises from bits, &c.

TREATMENT.—*Aconite* should be given at first when the animal is feverish, the mouth dry and red, and the tongue swollen and painful.

Arnica is indicated when the inflammation has resulted from injuries. *Arnica Lotion** may also be applied locally.

Mercurius may be given with good results when, as a result of acute, unchecked inflammation the tongue is hard and much swollen; also when there is great dribbling, difficulty of swallowing, and redness and rawness of the mouth generally.

Hepar sulphuris may be required when matter is forming in the tongue.

Arsenicum is the best remedy when gangrene threatens.

DOSE.—*See page* 13.

In addition, if suffocation be imminent on account of the great swelling of the tongue, and if matter have formed, incisions should be made into the tongue. Plenty of cold water should be allowed, together with gruel, linseed tea, &c., and if necessary, thin fluid foods should be given by drench.

* See list of local applications.

3. Protrusion of the Tongue.

This is a symptom of paralysis, weakness of the muscles of the tongue, and of injuries. Paralysis of the lips on one side sometimes coexists, resulting from local injury to the nerves distributed to the parts. The lower lip then hangs down, and food is picked up with difficulty; there is also more or less slavering. The tongue is very liable to be severely injured when it falls between the front teeth, and repeated injuries of this kind may result in troublesome wounds or ulcers.

Treatment.—When arising from injuries, give *Arnica.*

When a symptom of paralysis, the most likely medicine to do good is *N ux vomica.*

The last medicine failing to improve after a month's course, try *Belladonna.*

Dose.—*See page* 13.

When the tongue is injured, refer to the following article.

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4. Injuries about the Mouth, Tongue, &c.

The tongue may be injured by the forcible and awkward administration of balls and drinks, and the fringe of membrane which connects the under surface of the tongue with the floor of the mouth may be torn. The lower jaw and angle of the lips are sometimes hurt, and even a portion of the tongue severely crushed, by bits, or rough usage in riding or driving. Rough, irregular, too long teeth may tear the tongue, or bruise the cheeks and palate. Needles, thorns, sharp bones, may stick in the tongue or mouth. By the absurd use of bearing-reins, the angle of the mouth is bruised, and an abscess may form and break in the inside or outside.

TREATMENT.—In all cases, apply *Arnica Lotion** three or four times a-day, and *Calendula Lotion** for open wounds, cuts, &c. Remove foreign bodies. When ulcers form, give *Hepar sulph.*

DOSE.—*See page* 13.

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5. The Lampas.

By this name is called a swelling, more or less painful, of the bars of the roof of the mouth behind the front teeth, generally on a level with the teeth's surface, sometimes projecting lower. It is not a specific disease, but a symptom connected with the shedding of the teeth in young horses, or with disordered stomach. It interferes with feeding and chewing, causes the horse to be off his feed, and is usually attended with some degree of feverishness.

TREATMENT.—Let it alone, or treat as for "Difficult Teething" (page 40), or "Indigestion" (which see), according to the symptoms present. If any one recommends "burning," ask to have the same measure tried on the roof of *his* mouth.

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6. Salivation.

Excessive dribbling of slaver from the mouth has already been alluded to as a prominent symptom in inflammatory diseases of the mouth, &c. It has been observed from eating grass containing mustard, and from the use of mercury internally or externally.

TREATMENT.—Remove the cause, frequently inject cold water into the mouth, and when it does not arise from mercury, give *Mercuricus;* when it does, *Hepar sulph.*

DOSE.—*See page* 13.

* See list of local applications.

7. Ranula.

Ranula consists in obstruction and distension of the duct of one of the glands which secretes saliva, under the tongue, on one or on both sides. When large it is very troublesome.

Treatment.—Open with the lancet. Give 10 drops of *Mercurius* three times a-day. If necessary, dress the wound with *Calendula Lotion.**

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8. Mumps.

This disease consists of inflammation of the parotid gland. In addition to the parotid, the gland on the inner side of the lower jaw-bone may likewise be inflamed. This especially happens in strangles. In ordinary cases, after exposure to cold, or from some other cause, the animal becomes feverish, off his feed, thirsty, &c.; then symptoms of sore throat come on—cough, difficulty and evident pain in swallowing, and some obstruction to the breathing. The gland, usually on one side, sometimes on both, swells and becomes hard and painful to the touch. The swelling does not go on to the formation of matter, but remains hard for some time.

Treatment.—Foment with hot water for half-an-hour three times a-day, and after each fomentation apply a hot bran poultice. (*See* "Poultices" *in Index.*)

Two medicines are generally sufficient in this disease—*Belladonna* and *Mercurius*, six times a-day, four hours between each dose.

Dose.—*See page* 13.

When the swelling is so large as to press upon the throat and upper part of the windpipe, and so render breathing difficult, it may be necessary to avert the danger of suffocation by opening the windpipe.

* See list of local applications.

CHAPTER V.

DISEASES OF THE THROAT.

1. Sore Throat—Inflamed Throat.

Sore throat is the name commonly applied to an inflammatory condition of the back of the mouth. It often attacks young horses when brought out of the farmer's hands and put into hot, ill-ventilated stables, and when they are sent to work and placed on unusually good food. This change in their stabling, work, and feeding, predisposes them to be acted upon by exposure to the weather, and sore throat is induced, or some more serious disease of the breathing organs.

In simple sore throat there is some febrile excitement, with loss of appetite, thirst, &c., followed by hard, dry cough, difficulty of swallowing, quick breathing, and swelling of the throat externally, as well as tenderness when it is handled. The glands under the jaw and below the ears are hot, tender, and swollen. Subsequently, the cough is looser, a discharge flows from the nose, and the mouth contains a frothy fluid. In the majority of cases these symptoms gradually subside until health is regained, or symptoms of laryngitis or of bronchitis come on. Sometimes the inflammation extends to the guttural pouches, and then, if matter should form, as is occasionally the case, there may be great obstruction to the breathing.

Treatment.—At the beginning of the attack, when the

animal is feverish, the pulse and breathing quickened, the membrane of the eye and nose red and injected, the throat tender, and swallowing painful, *Aconite* will suffice, if given early, to arrest the further course of the disease in a large number of cases.

Belladonna is best for a later stage, when the inflammation is more firmly established, and is indicated by swelling and tenderness of the glands and throat externally, great difficulty and pain in swallowing—so much so as to cause fluids to return by the nose, and by discharge of stringy saliva from the mouth. The existence of a dry, irritating cough is an additional indication for its use.

If the last medicine should make no decided impression on the disease, *Mercurius* should be substituted, or the two medicines may be given in turn, in the same doses, every two or three hours according to the urgency of the symptoms. This medicine is indicated by somewhat the same symptoms as Belladonna.

Dose.—*See page* 13.

If there be much external swelling and tenderness, foment three times a-day with hot water, and afterwards apply a good-sized hot bran poultice to the throat. Give cold water and gruels of linseed or oat-meal, and have the stable well ventilated.

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2. Obstruction—Choking.

Horses are sometimes choked by food, such as chaff, bran, carrots, turnips, and such-like, accumulating or sticking fast in some part of the swallow, or the canal lower down; by the food not being properly chewed and softened by admixture with saliva; and by diseases, such as inflammation, stricture, dilated pouches, in the passage itself.

When the obstruction is in the throat, the animal is in an anxious distressed state, coughs, slavers, breathes quick,

seems to be choking, breaks out in sweats, and frequently retches without being relieved. Water administered, or imbibed voluntarily, returns through the nose.

When the obstruction is in the neck portion of the food-tube, in addition to the foregoing symptoms, a swelling will be seen in the left side of the neck ; and when lower down still, in that part of the tube which lies out of sight in the chest, we find violent retching after swallowing fluids, besides most of the above symptoms, except that the choking is less urgent.

Treatment.—In the first place, if it be due to some foreign body in the back of the mouth, or in the throat, the best plan is to open the horse's mouth, pull the tongue well out, and introduce the hand, and so remove the mass or obstructing object. At the same time, the assistant may render efficient service by compressing the throat externally and trying to loosen the obstacle. In the second place, when it lies in the food-tube beyond the reach of the hand, the swollen part at the side should be rubbed up and down with the flat hand, and such grasping pressure made with fingers and hands as will be suggested by the intention to loosen the obstacle from where it is fixed, or to break down the mass into smaller pieces. Along with this handling, the animal should drink, or have drenched into it, some tepid water, thin gruel, or oil, in the effort to gulp which, the offending obstacle may be carried down, or, in attempts at retching, be brought up by the mouth. When this fails, and even at the first if the obstacle be large and completely immovable, the probang should be introduced at once, the use of which requires some tact, practice, and knowledge of anatomy. Still foiled, there is no other resource left save opening the tube, and removing the cause of obstruction. The wound must then be stitched up, and no solid food given for some time.

Usually, weakness of digestion remains, for which *Nux vomica*, and the other remedies prescribed under " Indigestion," may be required.

CHAPTER VI.

DISEASES OF THE STOMACH.

1. Vomiting.

Horses rarely vomit, but attempts at vomiting are sometimes observed during attacks of colic, ulceration of the mucous membrane of the stomach, distension of the stomach with contraction of the bowel immediately beyond; and more frequently, when the food-tube in front of the stomach is contracted or dilated as to give rise to accumulation of food, as described at page 50, on choking. Vomiting also occurs when the stomach is burst, an event which sometimes happens in stomach staggers.

Treatment.—Vomiting will cease on the cure of the disease of which it is a symptom. See remarks on "Choking," "Indigestion," "Colic."

2. Indigestion.

Indigestion is derangement of the process by which the food is naturally digested, &c. It arises from giving indigestible food; allowing too much food after giving too little; eating too much at too long intervals; imperfect chewing, either from diseases or irregularities of the teeth, or from greed; severe work soon after a meal.

The tongue is foul and coated; the mouth slimy; the dung dry and mixed with undigested oats, or hard, glazed,

and offensive; the urine scanty and thick. The appetite is unnatural or capricious; sometimes the horse eats very greedily, at another he eats very little, or takes one food and leaves others; or he prefers dirty straw to the best oats and hay; or he licks the wall and swallows the plaster from it. He soon gets out of condition, loses flesh, does not thrive, and his skin looks "hide-bound." He sweats easily, and does not work so well as formerly, being weak and spiritless. Very often, he has a short, hacking, irritating cough. It is evident from his manner that he sometimes suffers from smart colicky pains.

Treatment.—Give *Nux vomica* for depraved, fastidious, changeable appetite; confined bowels; dung hard, lumpy, and glazed on the surface with mucus; tongue furred and slimy.

Arsenicum is a most valuable remedy when the horse is weak and unthrifty, eats little or nothing, coughs frequently after eating or drinking, &c.

Another good medicine for somewhat similar symptoms to the last is *Ferrum*, which should be given if Arsenicum does no good.

Dose.—5 grains of *Ferrum* thrice daily in a handful of mash; of *Nux* and *Arsenicum* 10 drops in a wineglassful of water.

Food, &c.—Soft and easily-digested food should alone be allowed, and in small quantities at short periods. The horse should be moderately exercised, and not over-worked.

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3. Acute Indigestion—Overloaded Stomach.

This comes on suddenly from over-eating and gorging the stomach. The food either lies undigested, and then acute founder of the feet is very apt to come on; or it ferments, and then the stomach and bowels are distended, and violent symptoms of colic set in. Rupture of the stomach

and twists of the bowel are common results. These severe consequences are most frequent when the horse has drunk too much water, as well as eaten too freely of oats, carrots, turnips, potatoes, &c. The reader is referred to the description of "Founder" and "Colic" in other parts of this work.

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4. Stomach Staggers.

SLEEPY STAGGERS—MAD STAGGERS.

This name is applied to an assemblage of symptoms, which show that both the stomach and the nervous system are affected. The stomach is more or less crammed with hard and undigested food, as much as 60 lbs. weight having been found in it. It is more common in some districts and seasons than in others. Rank grasses, the common ragweed, ryegrass containing ergot, &c., have been blamed for its production; but it is also met with after the horse has eaten any other food, especially if he be old, fed on bad food, or be exhausted from illness, over-work, or ill-usage. It often arises when a horse is long fasted and then is allowed to swallow, without slowly chewing, too much oats, bran, hay, &c. Farm and cart horses are the greatest sufferers.

The bowels are confined, the dung hard and slimy, and little or no urine is passed. Occasionally pains come on in the bowels, and then the animal paws the ground, looks round to his flanks, and lies down and rolls over. Sometimes wind is belched up. Partial sweats break out. The mouth and eyes are tinged yellow. The horse's manner is the most notable feature in the symptoms. He is dull and sleepy, hangs his head on the manger or rests it against the wall; the eyelids are closed or nearly so; the eyes are partially or wholly insensible to light; from this condition a strong blow or loud noise may awake him, but presently the same stupor steals over and masters him again. Sometimes

the muscles are seized with sudden twitching, and fore-legs drop as if he would fall. The breathing is slow, laboured, moaning, or noisy from throat-rattle. The pulse is full, frequent, and oppressed.

These symptoms either abate, leaving the horse more or less affected in his sight, and with a weak stomach; or they change their character and indicate excitement of the brain.

Mad Staggers, which is a condition occurring either as the advanced stage of stomach staggers, or without the sleepy symptoms above described. As the symptoms of this stage or form bear a close analogy to those of inflammation of the brain, the remarks on this latter disease should be referred to.

Now, the horse shivers all over; runs his head against the rack, manger, or wall; stamps wildly as if he were in a passion; plunges about the box; kicks out; rears upwards, and falls backwards on the ground, panting for breath, and sweating all over; or jumps with his fore-feet into the manger. The eyes are thrust out, fixed, and wild-looking, and the pupils dilated. The breathing is quickened and the nostrils opened out wide; the pulse hard and accelerated. These attacks recur until one more severe than the rest ends life, often preceded by vomiting, as a sign of ruptured stomach.

Treatment.—The treatment of stomach staggers consists, in the first instance, in removing the cause, which is an accumulation of food in the stomach, by means of mechanical agents calculated to expel the mechanical obstacle. As much water should be allowed as the animal will drink, no food should be offered, and clysters should be thrown up freely. At least one dose of croton or aloes ought to be administered in order to obtain the evacuant action of a powerful cathartic. In addition, *Belladonna*, when there are present the symptoms above described of mad staggers; *Opium* for those of sleepy staggers; and *Nux vomica*, after

the urgent symptoms are over, when the stomach is weak and unable to digest food properly.

Dose.—10 drops in a wineglassful of water, or in a draught of water, every hour or two according to the violence of the symptoms. One dose of *Nux* four times a-day, for the subsequent weak digestion.

For some weeks, great care must be taken to give soft food in small quantities frequently.

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5. Crib-biting and Wind-sucking.

These two tricks, or symptoms of disease, whichever they may be, are mentioned here because they are either the results of a disordered stomach, or frequently lead to it. Certainly both lower the horse's condition, and would seem to render him more than usually liable to indigestion and attacks of colic. Many horses acquire the habit by imitation; therefore those addicted to it should be kept apart from others.

A crib-biter fastens his front teeth into the manger, curves his neck, and sucks in air with a peculiar noise.

A wind-sucker presses his lip against some hard body, brings his feet together, arches his neck, and swallows air, without fixing the teeth. After either of these two performances the belly becomes enlarged and drummy.

Treatment.—Various contrivances in the shape of racks and straps are sold for preventing both practices. Straps cause swelling of the head, and tend to set up roaring.

If symptoms of indigestion be present, consult the remarks on that subject in this chapter.

In the eye of the law, crib-biting, which has not proceeded so far as to induce a disease or change of structure, or to interfere with the horse's usefulness, is not unsoundness, but a vice; and a purchase under a warranty that a horse is "sound and free from vice," is void.

6. Stomach Pain.

I have often observed a class of symptoms which I believe to arise from pain in the stomach. They are as follow:—The general symptoms resemble those of colic; the horse shows by his manner, restlessness, and looks, that he is in pain; he turns his head round to the left side and puts his nose there behind the left elbow-joint. Besides, wind (gas) rises up from the stomach, and in its passage along the food-tube causes a waving motion similar to that—only in the opposite direction—which takes place when water or food is swallowed. It is in reality a form, or a symptom, of indigestion.

TREATMENT. — I have never failed with *Antimonium crudum*, and therefore it is needless to refer to any other remedy.

DOSE. — 10 drops in a wineglassful of water every half-hour, or hour, until the symptoms are relieved.

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7. Loss of Appetite.

This is not a disease in itself, but a symptom of many different diseases, both acute and chronic. It is one of the first in diseases attended with febrile excitement. It is associated with diseases of the teeth, mouth, and stomach; and after recovery from serious illness, some loss of appetite remains.

TREATMENT.—When there appears to be tolerable health, but the horse does not eat as he ought to do, give *Arsenicum*, or *Nux vomica*, night and morning; or one medicine in the morning, and the other at night, in doses of 1 grain.

Of course an examination should be made to ascertain whether or not actual disease exists. The mouth in particular should be explored for irregular teeth, nails, injuries, &c., especially if the animal "quid" his food. See remarks on this subject at pp. 41 and 45.

CHAPTER VII.

DISEASES OF THE BOWELS.

1. Intestinal Worms.

The true worms found in the horse's bowels comprise three species of tapeworm; namely, the *Tænia plicata*, *T. perfoliata*, and the *T. mamilana;* a large round worm, the *Ascaris megalocephala;* and another, often called a threadworm, the *Strongylus armatus*.

The first kind are rarely met with, and when they do exist, give rise to little or no disorder. The presence of worms in general is denoted by staring, hidebound coat; appetite at one time poor, at another greedy; loss of flesh and condition; occasional attacks of colic, or of diarrhœa, dry cough, &c. When the worms are found passing from the bowels, all doubt is removed as to the cause of these symptoms.

Treatment.—In the treatment of worm cases we must, firstly, destroy and expel the worms; and, secondly, give such medicines as will improve the mucous membrane of the bowels and its secretions.

As a mechanical evacuant, give two croton beans powdered and mixed with a handful of bran mash. Then for the symptoms above described as the result of worms, give 1 grain of *Arsenicum*, first trituration, night and morning, in

a little mash; or, this failing to do decided good after having been administered for two or three weeks, *Ferri sulphas*, in the same way, in 5-grain doses.

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2. The Horse Bot.

The "bot" is the maggot form of the breeze, or gad-fly, of which three species take up their temporary abode in the stomach and entrails of the horse; they are the *Œstrus equi*, or great spotted horse-fly; the *Œstrus hæmorrhoidalis*, or red-tailed horse bot; and the *Œstrus veterinus*.

The natural history of these creatures is a curious one. Towards the end of summer the fly deposits its eggs on the inside of the horse's knees, on his breast, or on his lips; the eggs are covered with a gluey fluid which causes them to stick to the hair of these parts. Several hundred eggs may be thus laid on a single horse. They set up considerable irritation and itching, to relieve which the horse licks, or nibbles the skin, and in this manner they are conveyed into the stomach—a transition indispensable to the hatching of the eggs. Here the larvæ at once fix their heads, by means of sharp hooks, into the mucous membrane, where they hang in clusters. During the following winter and spring they undergo no further change, but gradually grow larger. Towards spring, being ready to advance another stage, they loosen themselves, and are discharged from the body along with the fæces. They then find a convenient hiding-place, where they change into the form of chrysalis, and some time afterwards into that of a fly. The second species mentioned above is commonly called the "lip and fundament bot," from two peculiarities—it fixes its eggs about the horse's lip, and after quitting the stomach often adheres a considerable time to the end of the anus.

If a horse out at grass in autumn is observed to be uneasy,

going awkwardly, and licking the inside of his legs, or his breast, or, when the lip-fly approaches him, tossing his head and galloping off, there is strong suspicion that he will be troubled with bots next summer. When bots exist in the stomach, there may be no symptoms whatever; but when they are in large numbers, various symptoms of indigestion, attended with loss of condition and flesh, usually arise. All doubt is dispersed when they are seen passed with the excrement, or hanging at the anus.

Treatment.—Nothing can expel them from the stomach; at the proper time in their development they come away of themselves. The best remedies for the effects produced by them are *Arsenicum*, or *Ferri sulphas*.

The first medicine should be given for two or three weeks; and then, after an interval of three days, the second, in case there should not be decided improvement.

In some cases, especially those attended with symptoms of colic and indigestion, I have seen good effects from *Nux vomica*.

Dose.—10 drops of *Nux* and *Arsen.* night and morning; 2 grains of *Ferri sulph.*

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3. Concretions—Dust and Hair Balls.

A small pebble, or other foreign body, when accidentally swallowed, is often found to be the centre of deposits of earthy matter, leading to the formation of stones, which vary greatly in size. These hard earthy stones are occasionally found in the horse's stomach, but more frequently in some part of the large intestine. They are met with oftener in some districts than in others—owing probably to the larger amount of calcareous matter in the water drunk.

The dust-ball is composed of oats, the dust of oats or barley used as food, and mucous material mixed up and matted together. They often acquire a very large size, and

there are often several of them in the same horse. They begin to be formed in the stomach around any body that will act as a centre-point for deposits, and afterwards pass into the bowels.

Treatment.—If it were impossible to be sure of the existence of these stones when they are small, it would be comparatively easy and safe to expel them through the bowel by means of a purge; but as this knowledge is wanting, and as the mass when once it has grown large cannot be made to pass along the bowel, nothing can be done but to give relief. A purge is then worse than useless, and is certain to do mischief. During the attacks of pain, treat as for colic.

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4. Costiveness—Constipation.

Costiveness is rather a symptom of many diseases, than a distinct disease of itself; nevertheless, it often assumes the importance of a special disorder. It is apt to come on from eating old rough grass—the tough fibres of which resist digestion and softening, and lace together so as to cause accumulation, especially in the rectum.

Newly-born foals are very liable to costiveness of a dangerous character. The excrement existing in the bowel before the foal's birth cannot be discharged, and symptoms of severe colic come on.

Treatment.—Horses should be regularly exercised, and be fed on boiled food and mashes, the quantity of oats being reduced for a time. The diet should be carefully regulated according to the state of the evacuations. Injections of warm water and soap should not be omitted, especially if the last portion of the bowel be stuffed full. "Back-raking" is not free from danger. I have often found the rectum torn, and the horse nearly killed from brutal or ignorant back-raking.

The best medicines for constipation are *Nux vomica*

and *Sulphur*—the former to be given for the first week, and the latter for the second, and so on in turns as long as may be required. Or, one may be given at night and the other in the morning.

Dose.—10 drops night and morning for horses; 5 drops for foals. Many cases do best with 1 grain night and morning of *Nux vomica*, first trituration.

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5. Colic—Gripes, &c.

This, one of the most common and fatal diseases, depends on spasm, or cramp of the muscular coat of a portion of the bowel. It arises from a variety of causes—such as dust-balls and stony concretions, masses of undigested food, and hardened excrement obstructing the bowel—from over-eating, as when a horse gets loose at night and walks into the corn-bin; or naturally has a greedy appetite, and gorges himself; or, during the day, has the nose-bag put on whenever he stops, and when brought home at night is again fed freely or allowed to eat as much hay as he likes—from irregular feeding, as when he is kept short at one part of the day and liberally supplied at another—from exhaustion, following hard work and coupled with improper feeding—from exposure to cold, or drinking cold water when the body is hot—from the presence of worms, &c. In the great majority of cases, the cause is some impropriety in feeding, and, therefore, if common-sense attention were paid to this point, there would be many fewer cases of colic. When a horse is frequently attacked with colic, there is a strong presumption that he has dust or stone balls in the bowels, especially if the general health and condition break down.

Let me sketch the picture of a griped horse. Suddenly, he becomes restless, walks about, crouches, paws the ground, kicks his belly with the hind-feet, looks often round to his side, &c. Presently, he lies down, and rolls about with more or

less violence; sometimes resting on his belly and looking round anxiously at his flank, sometimes stretched out full length, sometimes turned on his back, in a state of comparative calm. The pain now remits—he gets up, shakes himself, and begins to eat, or nibble. Before long, another attack, more severe than the first, seizes him, and the old symptoms are repeated with greater violence than before. He throws himself about wildly, utterly indifferent to the injuries he self-inflicts; his eyes stare and look anxious; he breathes fast; his skin is more or less covered with sweat; he tries to stool, but passes little or nothing; he perhaps voids a few small hard lumps of dung. After several such displays, the attacks become milder and fewer, and finally cease; or they increase in number, and then he exhibits indications of exhaustion; walks unsteadily, or reels round the box; finds no temporary relief save when lying against the wall on his back; his muscles twitch; his breathing is quick and groaning; his pulse small and hurried; he breaks out in patches of cold sweat; the retracted lips expose the clenched teeth; and ere long, death closes the painful scene.

Colic may continue from half-an-hour to a day, and may lead to death from rupture of the bowel, or of the midriff, or from twisting of the bowel.

There is another form of this disease, called by some *Flatulent Colic*, or *Acute Indigestion*, which arises from eating too fast, overloading the stomach, drinking too much water, working on a full stomach, eating turnips, carrots, potatoes, rank grass, &c. The food either remains undigested, or it ferments and gives off gas, which distends the stomach and bowels. The symptoms are similar to those first depicted; with the addition, that the belly is more or less bloated, and drummy when struck—that rumbling noises are heard within, and wind discharged from the bowels—and that the horse frequently retches, and may succeed in vomit-

ing. This is the more dangerous of the two forms, and very frequently terminates in rupture of the stomach.

Treatment.—*Aconite* is indicated by the following symptoms:—when the attack has been induced by a chill, or by drinking cold water when the body was hot; when the animal's behaviour, as above described, shows that he is in great suffering; when he frequently tries to pass urine and dung; when the belly is tender, swollen, and wind rumbles in it.

Ammonium causticum is, according to my experience, the only single medicine which can speedily cure the largest proportion of colic cases; it is more especially suitable for "windy colic."

Nux vomica is the best remedy when the attack arises from eating indigestible food, or from over-eating, or from accumulation of excrement; when hard, dry lumps are discharged; when the horse makes straining efforts to urinate and dung, without any result, or with but little; when the pain is not of the most violent character, and the horse does not knock himself about savagely, but lies a good deal on his side, restless and uneasy, and every now and then looks round to his side.

Colocynthis is indicated in cases attended with most severe pain, causing the animal to roll about violently; also when the attack appears to result from eating green food, and the belly is much distended with gas; and when wind and watery motions are discharged by the bowel.

Dose.—10 drops of any of the above medicines. Repeat each dose every fifteen or thirty minutes, according to the violence of the symptoms.

There are several other medicines which are of use in exceptional cases, but the above are sufficient to cure the great majority, and that more speedily than the ordinary plan of giving turpentine, purges, &c. Injections of warm water should be thrown up occasionally. The operation of

"back-raking" relieves the rectum, but injections are safer, and just as effectual. I have known stable-men and grooms thrust their hand through the bowel, and, of course, thus destroy the horse. The animal should be turned into a loose box, with plenty of straw to roll on. Compelling a gripped horse to walk and trot is downright cruelty, and a most dangerous practice. After the attack is over, give soft food, and exercise gently for two or three days.

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6. Diarrhœa.

The frequent discharge of liquid excrement, uncoloured by blood, which constitutes diarrhœa, is a very frequent symptom of disease; "washy" animals—those with narrow loins and great width between the ribs and haunch-bone—are peculiarly subject to it; some horses without this make are constitutionally predisposed to it; hunters, excited with going to hounds, are often troubled with it. Change of diet, bad or improper food, often induce it, especially in association with over-work. Superpurgation is the result of giving purges in too large doses, or too frequently—a practice much less common nowadays than in past years, and one that killed many a horse. Purging also arises towards the end of influenza, and other diseases attended with prostration, and is a constant symptom of disordered liver.

The evacuations are passed frequently, with straining and discharge of wind. There are often indications of belly-ache; such as uneasiness, looking round to the flank, pawing the ground, rolling over, &c. When digestion is imperfect, the oats are passed undigested. The discharges are offensive, and mixed with more or less of slime. In bad cases, diarrhœa is a dangerous disorder in the horse, and may destroy life. This event may be apprehended when the legs are cold, the surface covered with cold sweats, the breathing

quickened, the pulse small and weak, the appetite gone, the strength rapidly reduced, and the flesh wasted away.

Treatment.—*Bryonia* should be given when the purging arises from drinking cold water or being exposed to sudden changes of temperature, whereby perspiration is checked, and a chill is received; when the evacuations are very fluid, and passed almost involuntarily; when they contain undigested food; when it seems likely that drinking impure water, containing vegetable matter, as on moors or marshes, has excited the attack; and when eating and drinking bring on purging.

Arsenicum is indicated when the diarrhœa is attended by violent pain in the bowels, as may be inferred from the animal's conduct; when the discharge is watery, slimy, greenish, or brownish; and when the animal becomes depressed, weak, thin, and does not eat.

Mercurius is suitable for cases attended with straining efforts; when the motions are slimy, frothy, dark, and offensive, and mixed with bile, and perhaps with streaks of blood.

China is a valuable remedy for the chronic form of diarrhœa, especially if the discharge is not accompanied by pain; when there is loss of appetite, failure of strength, and wasting.

Nux vomica is indicated when the diarrhœa is attended with symptoms of indigestion, as mentioned at page 52; and when purging alternates with constipation.

Colocynthis is required in those cases of violent colic which are sometimes attended with looseness.

Dose.—*See page* 13.

Food.—If the food be faulty, withdraw it. Starch gruel and wheaten flour gruel are good drinks.

7. Dysentery—Bloody Flux.

Bad food, exposure, and overwork strongly predispose to this disease; and grazing on damp, marshy pastures excites it. Young, well-conditioned horses have the acute form; and old, done-up horses the chronic.

The usual symptoms are as follow:—Pulse small and quick; breathing quickened; great thirst; no appetite; frequent efforts to relieve the bowel, often without success, attended with symptoms indicative of pain in the belly; the straining is so severe sometimes as to force out the end of the rectum a short distance; the discharges consist of excrement coated over with congealed blood, of slimy mucus mixed with dark blood, and of lymph—in the latter case presenting a fatty appearance, and hence the old name given by the farriers, "molten grease," from a notion that the fat of the body was melted down and then ejected by the bowels. If the disease continues unchecked, the horse becomes exhausted, very weak, and greatly wasted.

Treatment.—*Aconite* is frequently useful at the outset of the attack, when the pulse is quickened, the mouth hot, &c.; and when there are indications of pain in the belly.

The most valuable remedy, however, is *Mercurius corrosivus*, which is specially adapted for those cases which are characterized by severe straining; protrusion of the end of the bowel; discharge of pure blood, or of slimy mucus mixed with blood, and of hardened excrement; frequent urgings to relieve the bowel; symptoms of belly-ache before, during, and after each action.

Colocynthis comes next in value to the last medicine; it is more particularly indicated when the belly is distended and the seat of severe colicky pains; when the motions are slimy and streaked or mixed with blood; and when the animal is restless and occasionally shivers.

Ipecacuanha may sometimes be serviceable when the

evacuations consist chiefly of slimy mucus, with or without admixture with flakes of lymphy matter.

Acidum phosphoricum should be tried after *Mercurius* and *Colocynthis*, if the discharge of blood continues; and

Arsenicum when the discharge is offensive, and passed almost involuntarily, and when there are great weakness, wasting, and dulness.

Dose.—*See page* 13.

Injections of starch gruel are generally of great value in soothing the bowel; they may be thrown up two or three times a-day. The food should mainly consist of gruel; and after recovery, of soft fodder, &c. For some time, the diet must be very carefully regulated.

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8. Enteritis—Inflammation of the Bowel.

It arises from causes similar to those which have been enumerated as giving rise to colic, and also from twists and displacements of a portion of the bowel.

In the majority of cases, enteritis begins slowly with dulness, staring coat, restlessness, loss of appetite, quickened pulse, &c.; sometimes shivering is the first symptom; at other times, colic. The pain, judging from the animal's behaviour, varies in severity. The belly very tender under pressure, and tucked up. Constipation is usually present, unless when the attack is caused by irritant poisoning; then there is diarrhœa, attended with straining. The mucous membranes of the eye and nose are red and highly injected. At a later period of the disease, symptoms of prostration come on. The pulse becomes small and weak, and can hardly be felt or counted; the breathing quick, jerky, and sighing; the skin covered with cold, clammy sweat; the legs and ears as cold as ice; the strength rapidly declines; the muscles all over the body tremble and

twitch; and, lastly, convulsions come on, and life is soon extinct.

TREATMENT.—*Aconite* is generally the best remedy to begin with, especially when the animal is feverish and in great suffering.

Belladonna is indicated by fulness of the belly; tenderness on pressure; redness of the eyes and nose; and symptoms of severe pain.

Mercurius is indicated by great thirst; tender belly; watery, offensive evacuations, with more or less urging and straining; the evacuations also slimy and mixed with blood; prostration of strength; shivering; and perspirations.

Arsenicum is a valuable remedy for anxiety, restlessness, and rapid loss of strength; for small weak pulse; for looseness of the bowels; for great chilliness of the ears and legs.

DOSE.—*See page* 13.

Apply fomentations externally, throw up injections of starch, and give gruel freely.

CHAPTER VIII.

DISEASES OF THE LIVER.

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1. Jaundice—The Yellows.

Jaundice occurs as a symptom of inflammation of the liver, inflammation of the lungs, congested and sluggish liver, as well as obstruction or pressure acting on the gall-ducts.

The symptoms of simple jaundice are sufficiently obvious. The mucous membrane of the eye and the skin are tinged with a more or less deep yellow colour. The urine is dark-coloured from the presence of bile in it, as may be known by the yellow stain produced on linen moistened with urine. The fæces are hard, dry, and covered with slimy mucus. The tongue is furred and slimy, and the breath offensive. There is little or no appetite. Wasting of the body and swelling of the legs ensue.

Treatment.—*Aconite*, at the beginning of such cases as are attended with feverishness—hot skin, dry mouth, thirst, quickened pulse, &c.

Mercurius is indicated when there is pain in the right shoulder, as is shown by lameness of the right leg and tenderness on pressure; by the yellow colour of the eyes and skin; by the slimy evacuations; by loss of appetite, &c.

Chelidonium majus is useful for distension from wind,

dark urine, costive bowels, coated tongue, yellow eyes, whitish fæces, &c.

Dose.—*See page* 13.

The treatment of jaundice as a symptom is of course that of the major disease, whatever it may be. Also refer to the following remarks on inflammation of the liver.

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2. Hepatitis—Inflammation of the Liver.

Inflammation is often mistaken during life for congestion —in fact, the two conditions can scarcely be distinguished in the domestic animals. Both arise chiefly from high feeding, and hence are often found in London dray-horses.

In the *acute* form of the disease, the horse is dull, listless, and unwilling to move; the fæces are dark and lumpy, sometimes of a lighter colour than usual, and a most offensive smell; the urine high-coloured and scanty; the appetite bad. The feverishness may be very slight, or it may run high. The membrane of the eye is yellow; the mouth soapy and foul. Sometimes the pulse is quickened, sometimes remarkably slow. Lameness of the right leg is common, from pain in the shoulder; this lameness is often attributed to a wrong cause, and mis-treated accordingly. In bad cases, the pulse becomes weaker, the breathing quickened, the legs cold, and the animal, weak, sleepy, and staggering, dies ere long. In some cases, dropsy comes on.

In the *chronic* form, the symptoms are of much the same character, only they are slow in their progress. There is pain in the right shoulder, known by flinching on pressure, lameness, and pawing the ground.

Treatment.—*Aconitum* should be given when the fever is high, the skin hot, the tongue furred; and when there are thirst, restlessness, and pain on pressure in the region of the liver.

Mercurius is indicated when the whites of the eyes, and the skin generally, present a yellow colour; when the tongue has a yellowish fur, and the evacuations are knotty and clay-coloured.

Nux vomica is suitable against great tenderness on pressure in the hepatic region, thirst, high-coloured urine, costiveness.

Arsenicum is especially indicated after the disease has made some progress, and when typhoid symptoms are appearing, such as offensive, blackish diarrhœa; cold legs; great prostration; weak, small, irregular pulse. It is also suitable in the chronic form of hepatitis, when the liver is enlarged, the urine scanty, and dropsy of the belly present; or when the disease occurs in connexion with mange, or other skin eruption.

Digitalis is an important remedy against intermittent and frequent pulse; evacuations dry and ash-coloured; urine thick and brown; pain in the side, &c.

Podophylin should take the place of Mercurius for the same symptoms, when that drug either fails to do good, or has already been given in too large doses.

Dose.—*See page* 13.

CHAPTER IX.

DISEASES OF THE KIDNEYS, BLADDER, ETC.

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1. Nephritis—Inflammation of the Kidneys.

Nephritis may be caused by the presence of a stone; by various injuries, such as blows, sprains, &c., on the loins; it may follow chronic diseases of the bladder, and the employment of cantharides and turpentine. Blisters consisting of cantharides are still largely used; they are really unnecessary in the cure of any disease, and are undoubtedly painful. They are also dangerous; for the animal may use his tongue and swallow some of the blister, and nephritis may be the consequence.

The use of diuretic balls by grooms and others is also a very frequent cause of this disease.

In this disease, the pulse is hard and quick; the breathing hurried; the skin hot and dry; the mouth hot; the bowels costive; the urine very scanty, passed in very small quantity with frequent urging, and sometimes mixed with blood or matter. There is also intense thirst. The attitude and behaviour of the animal are almost characteristic. The hind-legs are stiff and kept widely apart, and there is the greatest reluctance to move. When he is compelled to move, he does so in a stiffened, constrained manner, and may walk lame.

The loins are hot, arched, and very tender, so that pressure causes flinching. At a later stage, in unfavourable cases, the breath and perspiration smell of urine, the animal becomes depressed and sleepy, and ere long falls down, struggles, and dies.

TREATMENT.—Throw up occasionally a clyster of hot water, give plenty of linseed tea or barley for drink, and apply warm fomentations, or a sheep's hot skin to the loins. The best remedies are the following:—

Give *Aconite* in the early stage when the symptoms of fever are marked, such as, hot skin and mouth; quick pulse and breathing; great thirst; urine scanty, &c.

When, as is occasionally the case, the disease is traceable to bad food, such as mow-burnt hay, kiln-dried oats, &c., give *Nux vomica*, especially if frequent urging to pass urine be present, in company with indications of colicky pains, looking round to the side, &c.

Camphor may have to be administered as an antidote when the disease arises from Spanish-fly, used in a blister or otherwise.

Cantharis is an excellent remedy in cases not due to that drug, when the urine is scanty and discharged in small quantities with urging efforts, and also when it is mixed with blood.

Arnica may prove useful when the disease has resulted from injuries to the back; and *Rhus tox.* when from sprains, &c. Both may, in such cases respectively, be applied externally in the form of a lotion.*

Mercurius cor. is indicated in the advanced stages when the disease has gone on to the formation of matter, or to enlargement.

DOSE.—*See page* 13.

* See list of external applications.

2. Diabetes Insipidus—Profuse Staling.

Here there is excessive secretion and discharge of urine. Musty or otherwise damaged oats and hay are very apt to bring on this disorder; and then it is associated with indigestion. In sheep, it has been ascribed to eating certain plants, including *Asclæpias vincetoxicum*, *Anemone nemorosa*, &c. The use of diuretics, such as nitre, may induce it.

The symptoms present no difficulty. The animal eats less than usual, is soon tired, sweats easily, and is weak and dull. The skin is dry and rough. There is intense thirst, and a disposition to lick the wall and to eat all sorts of rubbish. The mouth is dry and clammy, the tongue furred, and the breath offensive. The urine is perfectly clear, or more or less milky-looking; it is passed frequently in enormous quantities, and is altered in its chemical composition. The animal rapidly sinks in flesh and strength, and, in rapid cases, attended with very profuse staling, dies from exhaustion in a few days or weeks; in slow cases, not before a few months.

Diabetes Mellitus, in which sugar exists in urine, has been occasionally met with in animals, but it is much more rare than the disease above described. In both the general symptoms are the same.

Treatment.—Affected animals must at once be placed on different food and pasture. Good old hay in moderate quantities is the best. Carrots are good. Not much water should be allowed, and to that little, add pease-meal, or flour-gruel.

The most likely medicines to be of service are:—*Acidum phosphoricum*, which should be first tried, when the urine is largely increased, and the animal weak and wasted.

Nux vomica is indicated when, in addition to the symptoms above described, there are those of indigestion.

These two failing, *Baryta carbonica* and *Iodium* should be administered.

Dose.—*See page* 13.

3. Scanty Urine.

In a great number of diseases, the urine is scanty, as a symptom. It is also more or less diminished in hot weather, and when the animal is worked, or much exercised, because then a large quantity of the fluid of the body is carried off by the skin.

It occasionally happens, however, that a horse, for example, suffers from scanty urine and nothing more, attended with some more than usual efforts to relieve himself—a state of things which knowing grooms consider as requiring a "staling ball."

In such a case as this, instead of giving a drug that may set up an awkward amount of irritation, recourse should be had to *Arsenicum* or *Bryonia*, three times a-day, until the above symptoms pass off.

Dose.—*See page* 13.

4. Hæmaturia—Bloody Urine.

It arises from blows, sprains, and any manner of injury involving the region of the kidney, caused by overloading, jumping, &c. It is a common symptom of stone in the kidney and bladder, of various diseases of these organs and their appendages, and of purpura hæmorrhagica; and frequently follows foaling.

In hæmaturia consequent upon strains, injuries, &c., we find pain in the loins when they are pressed upon, some degree of feverishness, and discharge of clotted blood, alone or along with the urine. This form is very apt to recur, especially if the affected animal return to work too soon, or be overworked.

Another form of hæmaturia is that which prevails extensively in certain districts, affecting all herb-eaters more or less, and said to be produced by eating various hurtful plants and young trees, including arnica, aconite, digitalis, genista hispanica, &c. At first, the urine is scanty and reddish; subsequently, bloody, and discharged with ardent pain. The pulse is quickened, the appetite lost, the mouth hot, and the coat staring—all symptoms of febrile excitement, attendant upon active congestion of the kidney, which may run on to inflammation and abscess.

Treatment.—In the first form, where the bloody urine has resulted from injuries, blows, &c., the animal must be kept at rest, and have cold-water injections thrown up the rectum, or cold water poured on the loins. *Arnica* should be administered inwardly, and *Arnica Lotion* applied externally.

In the second form, the animal must be removed from the injurious pasture and fed on soft food, including linseed-tea.

Aconite should be given when there are symptoms of feverishness, such as hot mouth, quick pulse, diminished secretions, &c.

Cantharis when, in addition to there being blood passed alone or mixed with urine, there are forcing efforts to pass it, attended with pain.

Terebintha is sometimes of greater service than the last medicine for the same symptoms.

In the third form, give generous diet, plenty of linseed gruel, &c.

The best remedies are *Cantharis* and *Terebintha*.

Dose.—*See page* 13.

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5. Cystitis—Inflammation of the Bladder.

Amongst the causes of cystitis may be enumerated: exposure to damp and cold, injuries, extension of inflammation

from the kidneys, the irritation produced by a stone, by cantharides, &c.

The symptoms are frequent pulse, restlessness, and general constitutional disturbance. There is trembling of the hind-legs, attended with frequent efforts to void urine, which is either not discharged at all, or passes away drop by drop. After the evacuation of the urine, the pain subsides for a time. When the animal, during the pain, looks round to his flank, &c., an inexperienced person may think that the case is one of simple colic; but the evident and unmistakable urinary difficulty will make the nature of the case plain. That portion of the belly in which the bladder is situated, is hot, and tender when examined with the fingers. When the bladder is examined through the rectum or vagina much pain is felt. The urine varies in its appearance, being either clear, or mixed with either mucus, sediment, or blood. If the disease go on, other symptoms make their appearance. The bladder, previously so irritable that it contracted with the greatest force on even a few drops of water, now loses its power, and the urine gradually accumulates within it. The muscular wall is in fact paralyzed. When the coats of the bladder are so much stretched that further dilatation is impossible, the neck of the bladder yields, and the urine dribbles away involuntarily.

Treatment.—When there are quick pulse; frequent desire to urinate, discharge of scanty, bloody, turbid urine; pain on pressure in the region of the bladder, give *Aconite*.

When the urine is discharged drop by drop with great force; the pain increased during the act of passing it; the region of the bladder painful and distended, give *Cantharis*.

Nux vomica is another good remedy for the last-mentioned symptoms, and may be used in the rare event of Cantharis failing.

Linseed-tea, &c., should be freely administered.

Dose.—*See page* 13.

6. Spasm of Neck of Bladder.

This condition is usually excited in horses that do not stale whilst in harness, and that are allowed to drink freely when the bladder has not been emptied for some time. It is also provoked by the presence of stone.

The symptoms are not unlike those of colic. The attack begins suddenly with quick breathing, pawing the ground, lying down and rolling on the ground, turning round and looking at the side, and straining but fruitless efforts to stale.

The best remedies are *Aconite*, *Nux vomica*, and *Cantharis*, as directed in the preceding remarks.

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7. Stone in Bladder.

The horse or mare with this disease has a frequent desire to urinate, and postures accordingly. The urine is more or less scanty and difficult to discharge; sometimes, whilst passing away in the usual stream, it suddenly stops from the stone blocking up the channel at the neck of the bladder. The animal then groans or sighs, kicks at his belly, looks round, lies down, &c. Sometimes the urine dribbles away and excoriates the skin of the thigh and legs. An examination by the rectum detects the stone where it exists, and makes diagnosis certain.

The only treatment is removal by operation, into the details of which it is beyond the scope of this work to enter.

CHAPTER X.

DISEASES OF THE GENERATIVE ORGANS.

1. Abortion.

Amongst the causes are blows, strains, over-exertion, falls. It occurs during the course of other diseases, such as hove, inflammation of the bowels, &c.

The symptoms are dulness, depression of spirits, loss of appetite, &c., followed by hollow flanks, sinking of the enlargement caused by the foal, and stoppage of the usual movements of the living creature within, if it be dead. Then the mare breathes in a laboured manner, is feverish, and moans; a yellowish discharge flows from the passage; more or less violent straining comes on; and the foal is expelled either dead or alive.

Treatment.—In all animals threatened with abortion injuries of whatsoever kind and however inflicted, give *Arnica;* and if from fright, *Opium.*

At the same time turn the animal into a quiet place, well aired, and let the diet be light and sloppy.

Should death have taken place, it may be necessary to extract the foal, without waiting for the natural powers to do so; and, if necessary, the process of delivery may have to be aided by instrumental agency.

Secale cornutum may be required when abortion has actually occurred, for violent straining, free discharge of blood, weakness, feeble pulse, &c. If the afterbirth (cleansing) do not come away of itself within the usual period, give *Pulsatilla.*

Dose.—*See page* 13.

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2. Flooding after Delivery.

When the womb does not contract firmly, as it ought to do, after delivery, a considerable quantity of blood may flow into its cavity and externally. Injuries to the womb or passage inflicted during delivery, particularly when the process has been difficult and when assistance has been required, may give rise to excessive bleeding.

Treatment.—In the last-mentioned instances, after the expulsion of the afterbirth, the treatment consists in keeping the animal quiet in a cool, well-ventilated place; in applying a bandage tightly around the belly; in pouring cold water from a height, and throwing injections of cold water up the rectum or vagina; and in giving the medicines recommended for "Abortion"—the remarks on which should be referred to.

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3. Retained Placenta.

Naturally, the womb expels the afterbirth by its own contractile power. When this fails and the afterbirth does not come away, it is usual, if it be in the womb, to introduce the hand and thus remove it, or, if it be in the vagina (passage from the womb outwards), the same means can be more easily employed. Injections of warm water are sometimes used.

In my experience, two medicines, viz., *Pulsatilla*, or,

this failing, *Secale*, render all manual measures unnecessary in the great majority of cases. *China* is also of service.

Dose.—*See page* 13.

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4. Inflammation of the Udder.

We find symptoms of feverishness in this disease, such as quick, full pulse—accelerated breathing—hot mouth —costive bowels, &c. A portion of the udder is tender to the touch, hot, swollen, and hard. At a later period the appetite fails, the previously hard swelling becomes soft, the milk is found to be mixed with matter, or with blood, or both. If care be not taken, the matter has a tendency to burrow deeply into the gland, and the upshot may be that a portion of the udder is rendered permanently useless for the secretion of milk, or troublesome ulcers remain. In favourable cases, some hardening is left, but it disappears before long; in very bad cases, the inflammation is so violent that mortification ensues, and a portion of the udder sloughs off.

Treatment.—It is of the utmost importance to remove the milk several times a-day, either by the hand, or by using the teat-tube. Fomentations of hot water should be applied at least three times a-day. At the proper time the matter should be let out by the lancet.

The best medicines are:—

Aconite in the early stage, when the symptoms of febrile excitement, above described, are present.

Belladonna, when the udder or teat is red, painful, hot, and swollen, and the flow of milk arrested.

Phytolacca, if used early, will frequently cut short the attack and prevent the formation of matter. It should be used externally also.

Hepar sulphuris, when the matter is forming, with the view of hastening the process and bringing the swelling to "a head."

Mercurius, when, after the matter is evacuated, some hardening of the tissue remains.

Silicea, when troublesome ulcers remain, and the surface is too slow in healing.

Dose.—*See page* 13.

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5. Inflammation of Urethra.

Entire horses are sometimes troubled with this disorder from the too frequent performance of the sexual act, and both they and geldings may suffer from it through the irritation of cantharides or croton, or from a general catarrhal state of the mucous membranes.

Besides discharge from the urethra, we observe that the animal makes frequent efforts to stale, and that this act is attended with pain and difficulty. Swelling and ulceration of the parts may follow.

The treatment includes injections and applications of *Hydrastis Lotion*, and the internal use of *Aconite* and *Cantharis*. *Mercurius* is likewise indicated for the stage of ulceration.

Dose.—*See page* 13.

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6. Vaginitis—Inflammation of Vagina.

Mares suffering from influenza, especially at the time of "heat," are apt to have a discharge from the vagina, at first of a whitish gray colour, and subsequently yellowish white. The mucous membrane may or may not be somewhat redder than usual.

Inflammation of this part may also arise from injuries received during delivery, copulation, blows, &c. The mem-

brane is then red, and gives issue to a thin acrid discharge, which irritates and pains the parts it touches, and causes frequent and severe straining. In severe cases, there is considerable febrile disturbance.

The vagina should be injected two or three times a-day with warm water, in the first stage; and afterwards, when the inflammation is reduced and the discharge continues, injections of *Hydrastis Lotion* should be employed. *Aconite* is required when there is feverishness, and *Cantharis* when there is discharge and straining. *Mercurius* is called for, should abscess or ulceration make its appearance.

Dose.—*See page* 13.

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7. Phymosis.

Blows, kicks, warts, or abscesses in the sheath, swelling of the sheath, &c., prevent the exit of the penis by diminishing the orifice of the prepuce. In some cases, the result is that the penis does not protrude during urination, and the urine, collecting in the folds of the skin, sets up irritation, swelling, and pain.

The treatment must be regulated by the symptoms present. When the part has been injured by mechanical violence, apply *Arnica Lotion* two or three times a-day, and give *Arnica* inwardly. Warts should be ligatured or excised. Abscesses should be treated with fomentations, and *Hepar sulphuris* or *Silicea*. Injections of warm water or *Hydrastis Lotion* should be thrown in between the prepuce and glans penis.

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8. Paraphymosis.

Here the penis is protruded and cannot be drawn back within the sheath. It may arise from swelling of the glans,

with protrusion, after castration or an accident, or from weakness or genuine paralysis of the organ—the sheath in both cases tightly encircling the penis. Old geldings are especially the subjects of it, but those of any age, when suffering from general debility, may likewise present the same condition.

When the penis is paralyzed, the only effectual remedy is reduction of its length with the knife. In injuries, apply *Arnica Lotion.* When the cause is general debility, *China* and *Nux vomica* are the most promising remedies. *Aconite* and *Mercurius* are required for feverishness and inflammatory swelling. Applications of cold water, and scarifications of the tense swelling, are sometimes useful.

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9. Preputial Calculi.

These deposits of earthy matter are sometimes met with, especially in horses with long hanging sheaths. They may cause difficulty and distress in staling. The same may result from accumulations of dirt and sebaceous secretion in the prepuce and sheath.

The treatment consists in thoroughly cleansing the part with warm water, and dressing with *Hydrastis Lotion.**

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10. Castration.

As a rule, the best time for this operation is towards the end of April or the beginning of May, provided the weather at this season be neither too cold nor too hot. The usual age of the colt when he is converted into a gelding is one year, but the operation may be deferred for a longer period

* See list of local applications.

when the animal is thin and low in the neck. Delicate colts, or those weakened by previous disease, should not be operated upon until they have been built up by nourishing food and exercise in the open air. In all cases, much water and bulky food should be withheld for two or three days before gelding, but in no case is the animal to be starved.

After the operation, there is usually more or less swelling of the sheath, and sometimes of the abdomen, but this subsides without special attention. But should this be considerable, or should the cord become swollen and tender, the animal off his feed, and the pulse increased, fomentations of hot water should be at once applied, and 10 drops of *Aconite* given every two, three, or four hours, according to circumstances. In some cases, I give *Arnica* alternately with *Aconite*. The two most common bad results of castration are peritonitis and tetanus, for remarks on which the reader is referred to other parts of this work.

CHAPTER XI.

DISEASES OF THE RESPIRATORY ORGANS.*

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1. Bleeding from the Nose.

This accident must be regarded not so much as a disease, but rather as a symptom of different diseases, including glanders, ulceration in the nose, polypus, purpura hæmorrhagica and other blood diseases, &c. It may likewise arise from injuries, over-exertion, &c. The symptoms are sufficiently obvious. The blood is bright-coloured, except in certain blood diseases, when it is dark-coloured. In horses severely galloped in hunting, blood may issue from the mouth also; and if it be in large quantity, death may be instantaneous.

Treatment.—Where nose-bleed is symptomatic of disease, the latter must be treated; but in all cases when the bleeding is excessive, it demands exclusive attention for the time. Slight bleeding requires no treatment—it generally stops of its own accord. When this does not take place, treat in the following manner:—

Aconite is required when the bleeding attacks a horse in high condition, as the result of over-exertion, and when the

* Including the nose, nasal chambers, windpipe, air-tubes, lungs, pleura, &c.

pulse is full and quick, the breathing laboured, the membrane of the eye injected, &c.

Arnica is more suitable when the bleeding is the result of local injury. The injection of *Arnica Lotion** may be resorted to, in addition, in bad cases.

Pouring cold water on the head from a height may be advantageously employed. The use of tight collars, by impeding the return of blood from the head along the jugular veins, may predispose to, and even excite, bleeding from the nose. Of course such a collar should be discarded. For the treatment of bleeding from the nose dependent upon glanders, ulcers, purpura, the reader should refer to the observations on these diseases in other parts of this work.

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2. Nasal Catarrh—Coryza.

This disease arises from exposure to variations of temperature and to damp and cold, and from bad ventilation, foul, damp stables, &c. It begins with sneezing, some feverishness, swollen eyelids, red eyes, &c.; these are presently followed by a thin discharge which irritates the part over which it flows. Subsequently, the discharge becomes thick and mattery. The feverishness now begins to decline, the quantity of discharge decreases, the appetite returns, and health is speedily re-established. In bad, neglected, ill-treated cases, however, especially in a weakly horse, the symptoms take on the character of nasal gleet. Many cases are accompanied by sore throat, cough, and pain and difficulty in swallowing, from the inflammation extending to the throat.

Treatment.—Place the animal in a clean, well-ventilated box, clothe him warmly, and feed him on mashes for a few days. In order to have the nose cleaned out, cause him to

* See list of local applications.

breathe the fumes of vinegar by pouring some of the fluid on a red-hot brick placed in front of his head on a shovel. This will make him snort and sneeze, whereby a large quantity of matter will be expelled. The fumigation should be used at least night and morning so long as the discharge is copious.

The best remedies are :—

Aconite for dryness, stuffing, and redness of the nose; quickened pulse and breathing; hot and dry mouth, thirst, and loss of appetite—the symptoms, in short, which denote the febrile state.

Belladonna for swollen eyelids, red eyes, sore throat, pain in swallowing, and flow of tears.

Mercurius for sneezing, free flux from nose, coughing, and sore throat.

Arsenicum, especially if the discharge should continue in spite of the preceding treatment, and the disease threaten to lapse into nasal gleet; it is especially indicated when the horse is weak and off his feed; when the attack follows exposure to wet and cold, &c.

Dose.—*See page* 13.

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3. Nasal Gleet.

All chronic discharges from the nose are spoken of together under this one name, or as constituting *chronic nasal catarrh.*

The discharge consists of mucus, or a mixture of mucus and matter; it is whitish, yellowish, or greenish; it varies much in quantity, and is constantly flowing, although increased by sneezing and snorting; it is of a uniform consistence, sometimes partially clotted and lumpy; and it may issue from one or from both nostrils. The membrane of the nose presents an unhealthy leaden colour. The gland under one or both jaws is slightly enlarged; it may be

tender to the touch. In addition, the coat is staring, the appetite poor, and the strength more or less reduced.

Treatment.—On this point, I cannot do better than quote the account of two cases first published in my "Practical Reply to Sir B. Brodie's Letter:"—

Case I.

On 14th of October 1861, admitted a bay carriage-horse. This *horse has been under allopathic treatment for two months, and daily getting worse. The veterinary surgeon recommended him to be killed as incurable.*

Symptoms.—Copious discharge from both nostrils, adhering like glue; the whole of the nasal mucous membrane vascular; submaxillary glands enlarged; rough, harsh, unhealthy coat; low in condition and feeble; bowels costive; urine high-coloured; pulse 44, and feeble; bad appetite, &c.

Treatment.—To have *Hydras. c.*, 10 drops, first dilution, three times a-day, and the nostrils to be fumigated with a solution of the same drug.

15*th.*—The discharge from the nostrils not so copious, and the membrane not so vascular; pulse 40, and strong; appetite better. Continue medicine.

16*th.*—No discharge from left nostril; slight watery discharge from right; pulse normal; nasal membrane nearly of its natural colour. Continue medicine.

18*th.*—The watery discharge from nose quite ceased; gave four coughs this morning; to all appearance quite well; no fumigations for two days.

19*th.*—Cured.

The Turkish bath also was given.

Case II.

On the 6th June 1861, a bay carriage-horse, the property of the Right Hon. Lord W———, was sent to me, having a discharge from both nostrils. This horse has been under allopathic treatment for a considerable length of time without the slightest benefit, and it was feared the disease would soon terminate in *glanders*, and my advice was sought.

Symptoms.—Pulse and respiration normal; no cough; copious discharge—muco-purulent—from the nose, which adheres to the alæ nasi; the membrane of the nose is highly vascular; the submaxillary glands are enlarged, and tender to the touch; the animal is rather low in flesh, and not in a thriving state; appetite pretty good; fæces and urine normal; the hair is dry and harsh when felt, and the skin adherent.

Treatment.—To have *Merc. v.*, 10 drops, sixth dilution, three times a-day.

10*th*.—Greatly improved in every respect. Continue medicine.

20*th*.—Since last report he has had the medicine as before, and is now quite well.

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4. Case of Ozæna.

A horse belonging to A. Birley, Esq., Didsbury, near Manchester. This horse is 16 years old, 15 hands 3 inches high, used for carriage purposes, and, although delicate when young, has had good health during the last ten years.

14*th October* 1859.—Present state:—Pulse and respiration slightly quickened; discharge of thick yellow matter from right nostril; accumulation of greenish pus on the nasal alæ; horrible fœtor; the box being ill ventilated, the stench is intolerable and sickening; the right submaxillary gland is swollen and tender; appetite good.

Admitted to the hospital on the 17th.

Treatment.—*Kali bichrom.* 1, 10 drops night and morning; the nostrils to be fumigated with the same drug. The discharge began to decrease from the fourth day, and the horse was discharged cured on 22d November.

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5. Collections of Pus in the Nose.

After catarrh, matter is apt to accumulate in the frontal and nasal sinuses. There is, in addition to discharge of matter from the nostrils, swelling of the glands under the

jaw, and dull sound when the bone of the face over these sinuses is struck with the knuckle. When only one side is affected, the difference between the hollow sound of the healthy side and the dull sound of the diseased one is sufficiently marked to decide as to the exact locality of the collection. In some cases, *that* side of the face is also swollen, from the upward pressure of the imprisoned matter beneath.

Treatment.—Here it is imperative to remove a circular piece of bone by means of the trephine, and to remove the matter by thoroughly syringing out the cavities with warm water. Then, three times a-day inject *Hydrastis Lotion*,* and give 10 drops of *Hydrastis* three times a-day. *Mercurius*, *Kali bichromicum*, and *Arsenicum* are of service in such cases, in the same doses.

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6. Collection of Matter in Guttural Pouches.

In cases of catarrh where the disease has extended backwards, as well as in strangles, the guttural pouches are often involved in the inflammation, and the result may be that pus collects. When both sides are affected, the enlargement may be so considerable as to interfere with breathing and threaten suffocation. The discharge may escape into the throat, or make its way through the skin at the angle of the jaw. When it flows into the nose, we find the discharge issuing from one side when the horse holds his head down, as whilst grazing, because this position enables the matter to flow out of the pouch. Usually, the discharge does not escape regularly from day to day; it is much increased during work, and by the dependent position. The swelling may cause roughness of breathing or roaring, and, when large, causes the neck to be thick.

Treatment.—In chronic cases of this kind, turning the

* See list of local applications.

animal out to grass—in other words, compelling him to keep his head for a considerable time in a position calculated to allow the matter to escape—is often a successful measure. In others, an operation is necessary.

7. Influenza.

This disease is more definitely called Catarrhal Fever, and Epizootic Catarrh. When pure, uncomplicated, and typical, it consists of two factors—a general fever, and a specific affection of the mucous membrane of the nose, eyes, mouth, throat, and air-passages.

It is supposed to arise from some peculiar atmospheric condition—nobody knows what; it prevails extensively in certain years, striking a certain number of animals at one and the same time; it is most common in spring and autumn, and affects young horses more frequently than old.

The likeness between it and human influenza is singularly close. In an ordinary case of the genuine disease, the first symptoms are those of febrile excitement. The animal is dull, listless, off his feed. The pulse is quickened and feeble, the breathing slightly hurried, the urine scanty and high-coloured, the bowels costive, the skin of variable temperature, the mouth dry and hot, the membrane of the nose and eyes reddened. At this period, there is a congestive swelling and dryness of the mucous membrane of the nose and eye—a condition which subsequently extends along the air-tract. Presently, the affected membrane gives forth a secretion, which is at first thin and irritating, afterwards thicker, tougher, and mattery. At this period, the eyelids are swollen and tears flow down the face; and there is a discharge from the nose, attended with sneezing, and also from the mouth. In addition, we find indications of sore throat, pain and difficulty of swallowing, quidding of food, external swelling of the throat at the angle of the jaws and

in the space under and between the jaw-bones, frequent irritating cough, and greater acceleration of the breathing. It is a peculiarity of influenza that throughout its whole course the nervous system is profoundly affected; as witness, the early depression of spirits, languor, muscular weakness, want of energy, disinclination to move, staggering gait, halting and dragging of the hind-legs, and stupor, or (in some cases) a tendency to excitement. In a few days, more or less, these symptoms begin to subside and finally disappear, leaving the patient, however, weak and out of condition for a little while longer, according to the mildness or severity of the prevailing epizootic.

In practice, influenza is not often found thus typically well-marked and clearly defined as a catarrhal fever. The attacks of one year differ much from those of another, and even at the same period individual cases present great diversity of symptoms. For instance, in one case the fever may be of a somewhat decidedly inflammatory character; in another, it may be low and malignant. The fever may predominate over the catarrh, or the catarrh over the fever. Again, serious complications in contiguous, continuous, or distant organs may arise during the course of influenza, without the latter ever losing its specific features. I may instance inflammation of the lungs, pleura, heart, &c.; and more particularly diseases of the digestive mucous membrane. These different phenomena of a concrete disease have been classed by Hering and other Continental writers into three groups, somewhat arbitrary to be sure, but yet sufficiently inclusive as to be free from grave objections: they are, 1st, The catarrho-rheumatic; 2d, The gastro-erysipelatous, where there are the swellings of œdema; and, 3d, The gastric, or bilious-rheumatic.

In this country, the different varieties of influenza that have occurred within historical times may practically be arranged into two grand classes: 1st, That whose symptoms

are above narrated, in which the respiratory mucous membrane, and respiratory organs secondarily, are the chief local seats of inflammation; and, 2d, That in which these organs are less affected than the mucous membrane of the digestive canal, and the digestive organs.

In this last variety, the catarrhal symptoms referable to the nose, eyes, throat, and lungs, are but slightly marked—the force of the disease is spent elsewhere. We observe loss of appetite; thirst; symptoms that may, without stretching a point unduly, be interpreted as indicating headache and nausea; coated tongue, and accumulation of soapy saliva in the mouth; a yellow colour of the membrane of the eye, nose, and mouth, and likewise of the skin; slimy evacuations. In some years, as in the spring of 1865, these symptoms have been especially prominent. In some cases the eyelids were everted, the legs much swollen. Symptoms of headache—resting the head on the manger, or hanging it low down almost to the ground. There were often rheumatic pains in the legs, known by the animal being lame.

Treatment.—The patient should be placed in a clean, airy, well-ventilated, loose box, be sufficiently clad, and fed on oatmeal and linseed gruels, and bran mashes.

The most useful medicines are the following:—

Aconite is seldom required at the onset, except in those comparatively rare instances of the disease when the attendant fever is of a decidedly inflammatory character. It may, however, be called for during the progress of the disease, when local congestions and inflammations arise.

Belladonna is indicated by swollen, closed eyes; flow of tears; sore throat; pain and difficulty in swallowing; tenderness and swelling of the glands about the neck and jaw; irritating cough; indications of headache or of delirium.

Ammonium causticum is a valuable remedy for the com-

plication of congested lungs, which may be known by hurried, laboured breathing, dilated nostrils, cold skin, &c.

Mercurius is indicated by similar catarrhal symptoms as those which demand *Belladonna*, and in some cases these two medicines may be used in turn with great benefit. *Mercurius* is likewise valuable for foul tongue; discharge of saliva; offensive breath; yellowness of the eyes, mouth, and skin; slimy, bilious evacuations.

Nux vomica is peculiarly called for when the bowels are constipated, or relaxed at one time and confined at another; the evacuations hard, lumpy, and covered with mucus; tendency to drowsiness and apparent paralysis of the hind-legs.

Phosphorus is required when inflammation of lung is at hand or present, which may be known by the symptoms detailed in the chapter on that disease.

Bryonia must be given when any rheumatic or pleuritic element exists—short, grunting breathing; pain to the touch in the intercostal spaces; friction sounds heard on applying the ear to the affected side, &c.

Arsenicum is required for great prostration of strength and spirits; feeble pulse; and, in short, for the obvious low symptoms which characterize the worst variety of this disease—that in which the powers of life are profoundly and rapidly depressed.

Dose.—*See page* 13.

8. Congestion of the Lungs.

The sudden and severe engorgement of the lungs with blood so often met with in horses, is most frequently caused by a long run in hunting, or by any other severe and long-continued exertion. It also arises when a horse has been over-fatigued by a hard day's work, especially if he has been exposed to damp and cold. Under such

circumstances this disease is very common amongst the horses of our large brewers, and railway and carrying companies. By the adoption of a more rational system of treatment than that of bleeding, blistering, and so on, many hundreds of pounds would be annually saved.

The symptoms are beyond mistake. The patient's pulse is strong and full, and may count up to 100 per minute. The heart, on placing the ear to the side, is heard beating with unnatural agitation. The breathing is oppressed, laboured, panting, and may count 50 or 60. In some cases I have observed the breathing to be 80 to 90, and the pulse only 50, per minute. The nostrils are widely dilated, and work heavily. The eyes are staring, and anxiety and distress are written in the expression of the countenance. Sometimes blood flows from the nose in small quantity, or, if a vessel be ruptured, fatal bleeding may take place suddenly. The legs and ears are cold. These symptoms may end in death, or they may run on to pneumonia, or bronchitis, or pleuro-pneumonia, which should be referred to.

Treatment.—In simple congestion of the lungs, I find the best remedy to be *Ammonium causticum*, in 10 drops every hour or two.

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9. Bronchitis—Inflammation of the Bronchial Tubes.

This is a very common disease. It may come on and run its course without any preceding or accompanying disorder; very often it succeeds sore throat, catarrh, and congestion of the lungs. In a considerable proportion of cases, there is more than pure bronchitis—a touch of pure pneumonia, constituting Broncho-Pneumonia. Bronchitis arises from exposure to east winds, damp and cold, changes of the weather, &c.

The symptoms first observed, in sudden and uncomplicated bronchitis, are languor, loss of appetite, thirst, ears and legs cold, pulse full and quick, and breathing accelerated. The cough is at first slight, and afterwards frequent and painful. The in-taking act of breathing is attended with noise from the diameter of the tubes being diminished by a swollen condition of the mucous membrane lining them. This sound is heard best at the front of the chest, and also on applying the ears to the side. At a subsequent period, an increase of mucous secretion takes place, at first frothy, afterwards thick and mattery; it both runs from the nose and is coughed up. At this time, loud rattling can be heard in the chest on applying the ear to the side. The symptoms now begin to decline, and recovery soon takes place.

TREATMENT.—*Aconite* should be given for hot, dry mouth; quick, full pulse; thirst, and the other symptoms of feverishness.

Byronia is indicated for quick, difficult breathing; rattling in the windpipe and in the air-tubes in the lungs; frequent, dry, irritating cough; discharge of thick phlegm.

In the majority of cases, at the beginning, it will be necessary to give these two medicines alternately.

Belladonna is required for soreness of the throat; pain and difficulty of swallowing; violent fits of coughing, &c.

Antimonium tartaricum is indicated when the discharge of mucus is very copious; the cough loose; the rattling loud; and the breathing much distressed.

Kali bichromicum is indicated when the phlegm is tough, sticky, and stringy; in old-standing cases; and when the tongue is covered with yellow fur.

Sulphur I generally give when all the violent symptoms are on the decline, with a view to hasten recovery.

DOSE.—*See page* 13.

10. Pneumonia—Inflammation of the Lungs.

Fat, full-blooded animals, and those that are over-worked or severely galloped, are predisposed to this disease; and exposure to cold and damp, and to variations of temperature, determine the attack.

In some cases, it begins with a more or less violent fit of shivering, the ears and legs being cold, the skin staring, the nose pale, and the animal languid and depressed. In others, slight cold, want of appetite, cough, &c., are first observed. In either case, febrile reaction comes on; the pulse is frequent and full, counting 60 or 70, sometimes much more, in the minute; the breathing is short, laboured, and 30 or 40 per minute, or even much higher; the membranes of the nose and eyes are reddened; the mouth hot and dry; the expression of the countenance anxious and distressed; the bowels costive, and the urine scanty and high-coloured.

At a somewhat later period, the breathing becomes more laboured and heaving at the flanks; the nostrils are widened and in full play; the neck is stretched out at full length; the nose and head poked forward; the animal stands fixed in one place, with his legs separated from each other—in a word, he instinctively postures himself in such a manner as to bring the "extraordinary muscles" of respiration into full action. At the same time, the membranes of the nose, eyes, and lips have a dark bluish tinge; the legs and ears are remarkably cold, whilst the skin elsewhere may be moderately warm; patches of sweat break out here and there; the cough is only occasionally heard, or it is frequent, hard, painful, and attended with the discharge of reddish-coloured mucus. Still later, the pulse is small, weak, and can hardly be counted; the breathing is still more laboured and difficult; the expired air hotter than usual; the mouth cold and clammy; the teeth are ground; the muscles twitch

and quiver; the eyes are dim, heavy, and glassy; the animal very weak and drowsy; he wanders unconsciously around the box, or leans against the manger; he soon staggers and falls down; and whilst attempting without success to get up again, he groans, struggles briefly, and dies.

The *physical signs* leave no doubt as to the nature, severity, extent, and complications of the disease; and give valuable information as to the probability of recovery. One or both lungs may be involved. In the diseased parts of the lungs, a sound is heard resembling that which is produced when one's hair is rubbed between the finger and thumb, close to the ear. This sound is learnedly called "crepitation;" it denotes the first stage of pneumonia, when the lungs are engorged with blood or bloody serum. In the same parts the natural healthy sound is obscured, and, as the disease advances, displaced by the morbid one. As compared with the healthy lung, the diseased part gives out a dull sound when tapped, as is done when the human chest is "sounded." In the second stage, the lung loses its spongy structure, and becomes dense and solid. Neither crepitation nor the natural sound can now be heard, but instead, a blowing sound proceeding from the larger bronchial tubes which are surrounded by the solid lung. At a still more advanced stage, the sounds are rattling, from the passage to and fro of air through the effused fluids or products of inflammation. These either cease, and are gradually replaced by the gentle breezy murmur of health, or continue, and then indicate suppuration of the lung.

Treatment.—Place the animal in a well-ventilated box, and let plenty of air in; put on warm clothing; hand-rub and bandage the legs; and give small quantities frequently of whatever food he will eat.

The following are the best remedies:—

Ammonium causticum in those cases which begin with

languor; coldness of the legs, ears, and nose; rough, staring coat; quickened, difficult breathing; pulse small, weak, and frequent.

Aconite is indicated when febrile reaction comes on—the pulse being quickened and full; the breathing laboured and panting; the mouth hot and dry; the membranes of the eye and nose injected.

Bryonia is especially required, often in alternation with *Aconite*, when there are symptoms of bronchitis, such as loud rattling from the first in the air-tubes, heard when the ear is applied to the breast or side; the cough loose, and attended with discharge of frothy phlegm, &c.

Phosphorus is of the greatest value in this disease, especially in the second stage, when the lung is solidified—a condition which can be ascertained by detecting special physical signs. Also, when the breathing is very laboured and distressed; and when a reddish or yellowish discharge is coughed up.

Arsenicum is often of service in extreme cases, when there are great depression; weak pulse; cold clammy mouth; purging; no appetite.

Sulphur I always give as soon as the acute symptoms have yielded.

Dose.—*See page* 13.

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11. Pleurisy—Inflammation of the Pleura.

Exposure to cold, and injuries of the chest, broken ribs, &c., are the most frequent causes. It usually begins with shivering, followed by dry mouth, languor, anxious expression, &c. The pulse is quickened, hard, and wiry. The respiration is characteristic, the chest being comparatively still, whilst the muscles of the abdomen are in full play, and

whereas the act of expelling air from the lungs is easy and prolonged, that of inspiring air is short and constrained. The cough is short, hacking, and greatly increases the pain in the side, or "stitch," which the horse feels. The horse stands still in one position in a crouching attitude, with neck stretched out and his head protruded; he seems uneasy and in pain, and afraid to move. On applying pressure to the affected side, he flinches and grunts. The ear placed on the side hears a rubbing friction sound. The skin over the inflamed chest is thrown into folds, and the flanks are tucked up; the skin around the openings of the nostrils and around the mouth is wrinkled. When effusion of serous fluid occupies the cavity of the chest — HYDROTHORAX — the breathing becomes more laboured and quicker, but less grunting; the pulse feebler; the friction sound diminishes, or ceases; dulness on percussion is detected at the lowest part of the chest; and, in unfavourable cases, drowsiness, prostration of strength, and cold sweats usher in death. In a large proportion of cases, the membrane covering the heart, and in a few even the heart itself, is involved in inflammation at the same time as the pleura.

TREATMENT.—*Aconite* is required in the early stage, when the pulse is hard and full, the breathing quickened, the mouth hot and dry, &c.

Bryonia is required, in alternation with the last medicine, when the breathing is short and catching; the sides painful to the touch; the cough short and restrained; and when the animal grunts when the side is pressed against.

Sulphur is useful when all the severe symptoms are on the decline.

DOSE.—*See page* 13.

12. Abscess in Lungs.

As a result of pneumonia, a collection of matter is not uncommon. If a bronchial tube opens into the abscess, the matter, which is of a very offensive, stinking character, is coughed up more or less abundantly, and loud gurgling sounds are heard in it on listening at the chest.

Some horses recover; whilst others linger on, never pick up flesh, won't eat, and die.

Case.

In the spring of 1867, I treated a case of this kind in a horse belonging to Messrs Mowlem, Burt, and Freeman, contractors. The attack was one of severe inflammation of the lungs. An abscess formed, and burst into a bronchial tube, whereupon the breath became foul, and offensive matter was coughed up. The animal was convalescent in thirty days. The chief medicines given were *Aconite*, *Bryonia*, and *Phosphorus* in the early stage, and *Ammonium causticum* and *Hepar sulphuris* in the latter. I also used, after the abscess broke, a steam fumigation medicated with *Baptisia*.

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13. Bleeding from the Lungs.

Rupture of a bloodvessel in the lungs, and discharge of blood by the nose and mouth, is an occasional occurrence in the horse, almost always as the result of severe and long-continued exertion; more rarely from heart disease. A horse severely run with hounds may be fatally attacked in this manner.

Case.

On 2d October 1863, a horse belonging to Mr Jay, contractor, immediately after strongly exerting himself in pulling a cart out of a clayey place, was suddenly seized with coughing, and brought up a quantity of florid blood, and some ran out of his nose like-

wise. He continued his work up to the 6th, when he was again seized in the same way. I saw him next day. His pulse was 72, and soft; his countenance was anxious and dejected; his breathing was somewhat hurried; loud rattling could be heard in the windpipe and large bronchial tubes; he shivered; and after coughing, blood was discharged. Five days afterwards, nothing ailed him. The medicines he had were *Hamamelis* and *Bryonia*, in 10-drop doses every three hours.

In such cases, *Aconite* and *Arnica* are also useful.

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14. Roaring, &c.

When the air-passages from the nose downwards are obstructed, and the free entrance and exit of air impeded, various sounds are caused, differing in pitch and sonorousness; hence, a horse affected in this manner is called a *Roarer*, *Piper*, *Whistler*, *Blower*, *Grunter*, *Trumpeter*, &c., according to the character of the sound produced.

Roaring may arise from deformity of the nose, and from bony growths, polypus, and other tumours encroaching on the nasal passages; from tumours in the throat and upper part of the windpipe; from wasting of the muscles of the larynx on one side; from injuries to, and deformities and contractions of, the windpipe.

Treatment.—In cases depending upon tumours, &c., the only chance of effecting a cure lies in an operation.

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15. Broken Wind.

The phrase broken wind is applied to a condition of difficult breathing, best detected after exertion. It especially affects cart and low-bred horses, and is directly caused by

improper dieting, such as feeding on bad hay, giving too much hay, driving after eating a hearty meal, &c.

The animal's stomach is out of order; his belly is bloated with wind; undigested oats are voided; usually, he eats greedily, and yet does not thrive, and looks thin and seedy. He has a short, spasmodic cough, which subsequently becomes single, weak, wheezy, and suppressed. Pressure on the larynx elicits this characteristic cough. The act of taking air into the lungs is performed by one effort, whereas that of expelling air is performed by two, and takes twice the time; this peculiarity is especially observable at the flanks after exertion. In bad cases, the anus moves backwards and forwards with each act of breathing. Horses suffering from broken wind are of necessity poor workers; and they sometimes die suddenly from hæmorrhage of the lungs.

Treatment.—Radical cure can hardly be looked for, but much may be done by way of palliation. It is of the utmost importance to give good food, to prevent overloading of the stomach, to withhold chaff, and not to work the animal soon after a meal.

The two most likely remedies to be of service are *Arsenicum*, 1st trituration, 2 grains night and morning in a handful of mash, steadily persevered with for some time, and *Ammonium causticum*, 10 drops night and morning.

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16. Thick Wind.

This is a not uncommon sequel of inflammation of the lungs. The breathing is quick and laboured; inspiration and expiration being equally so, and occupying the same time. Exertion speedily makes manifest this peculiarity.

Treatment.—Little or nothing can be done, except by

proper feeding, to give even relief. *Arsenicum* may be tried as directed for "broken wind."

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17. Cough.

In the majority of cases, cough is a symptom of numerous pathological conditions; sometimes it may be regarded as a disease of itself, because it is the most prominent and unpleasant symptom.

1. In laryngitis, the cough is harsh, rough, and painful; in chronic laryngitis, it is hoarse and paroxysmal.

2. In catarrh, it is slight, occasional, and moist.

3. In bronchitis, it is hard, frequent, and dry in the first stage; soft and moist in the second.

4. In pneumonia, it is short and frequent.

5. In pleurisy, it is short, dry, and suppressed.

6. In broken wind it is frequent and wheezy, and induced by the least exertion.

7. The animal may cough from the lodgement of a foreign body in the throat. This part should always be examined when a patient is suffering from a frequent hacking cough which seems to be induced by some irritation in the throat, as in pharyngitis.

8. Cough of variable character may accompany diseases of the stomach and of the liver, worms, &c.

A cough is frequently the initial symptom of some approaching serious disease of one or other of the respiratory organs; the warning should not be unheeded. A slight cough induced by exposure to cold may end in a short time by slight mucous discharge, or it may subsequently become associated with other graver catarrhal symptoms.

Treatment.—It is obvious that the treatment must be regulated by two considerations,—the cause of the cough,

and the pathological state with which it is allied. The primary disease must first be made out, and then treated as directed in different parts of this work; for it would be in vain to attempt to cure a cough depending on the irritation of worms, for example, without first of all getting rid of the parasites.

The following are the best remedies, when the cough appears to be the only, or the chief, derangement:—

Belladonna for dry, short cough, worst at night, and apparently caused by irritation in the throat; and for sore throat and pain in swallowing.

Arsenicum for cough worst at night, and after eating and drinking, and on going up a hill, especially when attended with difficult breathing.

Nux vomica for dry, hoarse, spasmodic cough, worst in the morning, and after eating and exercise; and especially when the stomach is disordered, the tongue furred, the mouth foul, the appetite variable, the bowels confined, &c.

Kreosote, according to my experience, is a valuable remedy when the cough is of a hard, dry, ringing character.

Drosera is often indicated for chronic coughs, when hoarse and hollow.

Dose.—*See page* 13.

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18. Spasm of the Diaphragm.

I have seen several cases of a disease which, in my opinion, is correctly designated by the above name, and is often confounded with palpitation of the heart. "Nimrod" was the first to recognise and describe it. Since his day, others have published cases, and now there can be little doubt of its occurrence.

The following notes of one of my cases sufficiently detail the symptoms and treatment:—

Case.

On 31st August 1850, a mare belonging to Mr Sidebotham, Manchester, was taken ill after a very severe galloping immediately after feeding. The symptoms were :—Pulse 64, small, and wiry; respiration 42 per minute; vessels of eye turgid; strong, spasmodic, irregular action of the diaphragm, from 45 to 50 per minute; breath drawn in forcibly, attended with a snuffling noise at the nostrils, and as rapidly expelled without noise; pulsation very distinct at each side of the back. To have 10 drops of *Stannum*, 6th dilution. An hour afterwards the pulse was 40, full and strong, and the spasmodic action far less powerful. Gave 5 drops of the same preparation. Two hours afterwards the pulse was 30, full and strong; now and then a slight spasm near the lumbur vertebræ. Repeated the medicine. Four hours later the pulse was 36, the respirations tranquil and natural, and all spasmodic jerking or pulsations gone.

Refer to the remarks on "Palpitation of the Heart," for the symptoms which distinguish the one disease from the other.

CHAPTER XII.

DISEASES OF THE HEART.

Diseases of the heart frequently occur in the horse, but their detection during life, as well as the discrimination of one disease from another, is a matter of considerable difficulty, in consequence of the region of the heart being less accessible to examination than is the case in the human subject.

There are, however, a few diseases of this organ which can be made out with tolerable accuracy; to them I shall confine my observations.

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1. Palpitation.

Excessive action of the heart may occur in horses that are in feeble health and out of condition, or when strong horses have had a long run with hounds.

The symptoms are:—A dull, thumping noise proceeding from the interior of the body, and quite audible at a distance of some yards; this sound corresponds in time with the pulsations of the heart and the throbbing of the pulse. Sometimes the heart's action is so energetic as to cause a jerking or shaking over the whole body; and the flanks are raised up likewise.

Palpitation is sometimes mistaken for what has been

called Spasm of the Diaphragm, in which a somewhat similar sound is heard. In such cases, according to my own observation, the sound could be heard a few yards off, and was very distinct on applying the ear to the back on each side of the spine. The breathing and pulse were both increased in frequency, and the thumps did not correspond with the heart's pulsations.

Treatment.—Rest the animal for a few days, be careful not to overwork him or drive him fast for some time afterwards, and pay attention to the diet.

If the stomach be disordered, treat as directed for "Indigestion," at page 53. In cases of palpitation depending as far as can be ascertained on indigestion, *Nux vomica* is especially suitable.

China should be given when there are symptoms of general debility and poor appetite.

Aconite is especially required for energetic action of the heart, occurring in high-conditioned animals, after exertion, and attended with quick breathing.

Stannum, 6th dilution, has always cured the symptoms of spasm of the diaphragm described above.

Dose.—*See page* 13.

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2. Enlargement of the Heart.

An increase in the size of the heart is rather frequently found in animals suffering from "broken wind." Such a disease affects the animal's powers of endurance and speed; and, when the animal is over-driven, may bring on hæmorrhage from the lungs.

The symptoms are:—The action of the heart is heard and felt to be stronger than it ought to be, and extending over a larger space. In some cases, the stroke of the heart against the side is very strong. The increased action dependent on

enlargement is constant, unlike that found in simple palpitation. In addition, a "clacking" sound is sometimes heard.

TREATMENT.—This disease is incurable. Regulating the diet, preventing overwork, and giving *Aconite*, *Arsenicum*, or *Digitalis*, will give relief and prolong life.

DOSE.—10 drops three times a-day.

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3. Dilated Heart.

This lesion may be known by symptoms which can hardly be mistaken. They are:—Loss of appetite; languor; cold legs and ears; difficulty of breathing on the least exertion; giddiness or "megrims;" small, soft, feeble, irregular pulse; feeble, tremulous action of the heart; and, in advanced cases, swelling of the legs, chest, and belly.

This disease is incurable.

CHAPTER XIII.

DISEASES OF THE NERVOUS SYSTEM.

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1. Tetanus.

There are two forms: the *idiopathic*, which arises from exposure to severe weather, and irritation of the stomach and bowels; and the *traumatic*, which follows wounds and other injuries, such as broken knees, open joints, bruises, nicking or docking the tail, punctured wounds of the feet, castration, fractured bones, &c.

As a rule, the symptoms come on slowly. In the earliest stage, the muscles of the jaw and neck are the first to be attacked, and hence the convertible term of the disease—Lockjaw. The animal manifests some difficulty in gathering his food with his lips, in swallowing, in moving his head and neck, and some degree of general stiffness in walking. Later, the muscles of the jaw are firmly contracted, hard to the touch on the cheek, and more or less completely close the mouth; so that by no force can the jaws be separated, nor can food by any means be nibbled up. The eyes are fixed, squinted outwards, pulled backwards into their sockets, and the "haw" drawn in front of the eyeballs. The neck is stiff and cannot be moved, and its muscles hard and rigid. The head is held firmly in one position, with the muzzle pointed forwards; the nostrils are expanded; the ears

project forwards, erect and fixed; the lips are stretched firmly across the front of the teeth, exposing them to view; and slaver dribbles from the mouth.

The belly is tucked up, contracted, and hard to the touch; the tail is elevated and in constant tremble; the anus is firmly contracted; the urine scanty, and the bowels confined. The animal stands resolutely fixed to one spot, with all his legs stretched out; if perchance he move, or be made to move, he does so, not in detail, but all of a piece, like a thing without joint or suppleness, and the least effort evidently causes acute suffering. The breathing is quickened, short, and constrained; the pulse frequent and hard.

The spasmed muscles are screwed up to a still higher degree of agonizing tension by any excitement, such as loud noises, angry talking, and even by light and rustling of straw. When the animal is kept in a dark, quiet box, to the care of an attendant who does his work with kindness and stealth, the spasms slacken somewhat, although the muscles are never wholly relieved from the tetanic grip until the disease is on the decline.

In very acute cases, the animal appears to be completely overwhelmed by the severity of the disease, and death occurs in a few hours; in others, death may not happen for several days.

Treatment.—The animal must be placed in a darkened loose box, and be kept perfectly quiet and free from noise or excitement of any kind whatsoever. To protect it from cold, put on sufficient warm clothing, and bandage the legs with flannel. The man in attendance must do his work in the quietest manner possible, and keep his tongue still. Thin gruel, milk, linseed and hay tea, slightly warmed, should be frequently offered. As the jaws open, boiled turnips, bran mashes, and bruised oats, are the best. After convalescence is fairly established, great care must be exercised to prevent overloading of the stomach.

The best remedies are the following:—

Aconite and *Belladonna* are the best at the onset of the attack. Give them in 10-drop doses every two hours alternately.

If there be no improvement in a few hours, I would recommend *Aconite* to be stopped and *Nux vomica* to be given in the same doses and times alternately with *Belladonna*.

Arnica is especially suitable when the disease is the result of wounds, and injuries in general; and in nine cases out of ten it will be necessary to give it in alternation with *Belladonna*, as directed above.

Rhus is indicated when exposure to wet is the exciting cause.

In the fully-developed stage, with intense rigidity and exacerbation of spasm on the least excitement, I would give *Nux vomica* alternately with *Arnica* in traumatic cases.

Each dose must be mixed with a tablespoonful of water, and this mixture injected into the mouth, by means of a syringe fitted with a long nozzle, which will admit of being insinuated between the upper surface of the tongue and roof of mouth, to the back part of the mouth. Or, having first cleared out the bowel by an injection of warm water, throw up 20 drops, or double the usual dose, of the medicines above mentioned.

It is impossible to lay down more precise rules for the treatment of such a disease as tetanus, which requires careful individualizing in each case, such as a practitioner on the spot, and conversant with the specialties of the symptoms, can alone do.

Wounds and injuries, if still unhealed, should be treated with *Arnica Lotion*. If the foot has been pricked in shoeing, the shoe must be removed, the horn pared away, and a poultice put on, adding some *Arnica* to the poultice.

2. Hysteria.

This name has been applied at my suggestion by Mr Haycock, of Manchester, to a rare disease of the mare. The late Professor Dick, in his "Manual of Veterinary Science," mentions that he recognised three cases of it, also in mares. I have, however, occasionally met with similar atacks in geldings. The pathology of the disease is quite unknown at the present time. The symptoms are not unlike those which are observed in cases of spinal apoplexy befalling the human subject.

The attack comes on suddenly, especially in mares that have rested and then worked hard, or have been lively and frisky at exercise. They begin to stagger, appear stiff and sluggish, are indisposed or unable to move on, and evidently wish to lie down. The hind-legs appear to be partially paralyzed. I have seen them standing on their fetlocks, with the soles of the hoofs turned backwards and upwards. When got into the stable, they lie fully extended on the ground, covered with sweat. They are every now and then seized with violent spasm, roll violently about, and strain strongly, when dark-coloured urine is discharged; the eye-balls are full and projecting, the eyes red; the muscles of the belly and legs are strongly contracted, and as hard as a board to the touch. The pulse and respiration are considerably increased in frequency. Symptoms of complete paralysis of the hind-legs appear, the animal makes desperate attempts to get up but cannot, and soon sinks exhausted. In some mild cases, the severe symptoms abate and the animal recovers. Such are the most important symptoms of this curious disease.

Treatment.—Begin with *Aconite* and *Belladonna*, in 10-drop doses, every half-hour or hour alternately. If, after a few doses have been given, the animal is better, continue

them every two or three hours, increasing the intervals between the doses, according to the improvement made.

If there is no change for the better, give *Nux vomica* in the same manner, instead of the other two medicines; it is likewise required in recovering cases when the paralytic symptoms do not clear off rapidly.

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3. Megrims.

Megrims means the same as *vertigo* and *giddiness*, and depends upon a congested state of the brain. Although giddiness is a symptom of tumours and other lesions of the brain, "megrims" is generally restricted to that particular giddiness which never comes on except when the animal is at work in a collar, and which is due to pressure on the jugular veins. A tight or badly-fitting collar is the direct cause, by impeding the return of blood from the brain along the jugular veins; and violent exertion, hot weather, dragging a heavy load up a hill, &c., determine the attack. Some horses are so peculiarly shaped in the neck that they become giddy even with a well-fitting collar. Megrims from obstruction of a jugular, left after bleeding with the fleam, is much rarer nowadays than formerly.

I have known saddle-horses seized with giddiness, spin round and round, and throw the rider off. Whether this arose from organic disease, or from temporary causes independent of all restraint affecting the neck, it is impossible to say.

The symptoms come on suddenly. The animal, whilst going along, suddenly stops, raises and shakes his head, looks wild with staring eyes, looks stupidly about him, and staggers or sways from side to side. If the collar be not at once drawn forwards towards the head, the animal reels and falls down in a heap, or he springs forwards and falls heavily

against any obstruction that may be in the way. He may now be convulsed more or less, the breathing being quickened and the nostrils dilated. Presently he gets up conscious, shakes himself, looks about him as if wondering what it all meant, and is soon himself again.

Treatment.—When the giddiness depends upon organic diseases of the brain, the case must be regarded as incurable. When it arises from a too tight bearing-rein, or from an ill-fitting collar, the means of preventing an attack are obvious enough. When an attack threatens, the collar should be speedily pulled forward, and cold water dashed on the head. If the animal be fat and full-blooded, the diet should be reduced.

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4. Stringhalt.

This name is given to a peculiar movement of the hind-leg, arising from irregular spasmodic action of the muscles, owing to some undiscovered disease of the nerves. Oliphant, in his "Law of Horses," says, "It is probably so called from its resemblance to the sort of halt produced by a string tied to the leg of a pig, and held in the hand of the person driving it." Legally it constitutes unsoundness. It is incurable.

CHAPTER XIV.

DISEASES OF THE EYE.

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1. Ophthalmia.

The most frequent causes are, injuries from a stick or whip, or knocking the eye against a hard body; the irritation caused by a seed, a bit of hay, or dust getting into the eye, or by the ingrowing of an eyelash; and an unhealthy condition of body induced by living in a damp, ill-ventilated place. In catarrh, as has been stated in my remarks on that disease, the eye is more or less inflamed.

The eyelids are swollen and closed, and there is a copious flow of scalding tears which run down the face and fret the skin. At the corner of the eyes a small qnantity of thickish mucus is observed at a later period. There is great sensitiveness to light, and a strong reluctance to separate the lids, or have them separated by force. On examination, the membrane of the eye is seen to be red, and traversed by a network of fine vessels, and the front part of the ball (cornea) is dim and muddy. In acute cases, there may be quickened pulse and other indications of feverishness; in chronic, there are none such.

Treatment.—It is necessary to examine the eye for foreign bodies, and, of course, to remove them, if found. The usual place for such bodies is under the upper lid,

which should be turned inside out by taking the edge of it between the finger and thumb and turning it out on the point of the finger. In all cases the eye should be bathed with warm water three or four times a-day, light excluded, and no corn allowed for a few days. Much relief may be given, when a small portion of the cornea has been removed by a blow or lash, by applying a drop or two of castor-oil to the injured part. Whenever injuries have been the cause, *Arnica Lotion** should be dabbed on the outside several times a-day.

Aconite is required when there are symptoms of feverishness.

Belladonna, when the eyes are very sensitive to light; the membrane of the eye red and injected; the tears copious; and the lids swollen and shut.

Mercurius corrosivus is indicated, especially after or alternately with the last medicine, when there is secretion of mucus with sticking together of the lids, and when the cornea is hazy.

Euphrasia is sometimes of service when there is copious secretion and flow of tears, and great intolerance of light.

Nux vomica may be required alone, or alternately with *Belladonna* or *Mercurius*, according to the indications for each, when there are symptoms of indigestion.

Sulphur is often valuable in chronic intractable cases.

Dose.—*See page* 13.

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2. Periodic Ophthalmia.

This disease, unlike simple conjunctivitis, consists, not merely of inflammation of the superficial membrane covering the eye, but of inflammation of the entire eyeball—of all the structures enclosed within the globe. It is called

* See list of local applications.

periodical, from its relapsing or recurrent character; and *specific*, from its presumed dependence upon some special constitutional cause, of which no one knows anything; and *moon-blindness*, from its frequently occurring at the time of the moon's changes. None of these names correctly expresses what the disease really is.

Some horses are more susceptible to it than others; those, namely, of lax and flabby fibre, with flat feet and thick skin, and soft-hearted and funky at their work, especially if they have been bred and reared on damp clayey soils, exposed to a humid atmosphere, fed on poor food, overworked, and kept in an ill-ventilated, ill-lighted, ill-drained stable. Pig-eyed horses, in whom the eye is small and sunk into the socket, are also peculiarly liable to suffer from this disease. It is beyond doubt that this affection is hereditary—that is to say, a sire or dam suffering from it, or blind from it, will transmit a tendency or predisposition to their progeny. It is more frequent in horses than in mares, and in young horses than old—both circumstances being explained by the local afflux of blood to the head during dentition, and the irritation of cutting the canine teeth, which are absent in the mare.

The symptoms begin either gradually with slight weeping and injection of the eyes, or suddenly, perhaps during the night, with swollen and nearly closed eyelids, and profuse discharge of tears. On making an examination, the animal shows his dislike to have the lids separated, and we discover that the eye is extremely sensitive to light and pulled backwards into the socket, that the "haw" is red, swollen, and drawn partially in front of the eyeball, and that the conjunctiva is everywhere highly injected and red. At the same time the pulse is full and frequent, the mouth hot and dry, the bowels costive, the urine scanty—all indicating a certain degree of feverish excitement, which varies with the suddenness of the attack and rapidity of its progress. In a

few days, more or less, the turgid vessels are observed as minute red lines running into the rim of the transparent cornea, and the latter now presents a whitish appearance, either from being rendered opaque in itself, or from turbidity of the clear internal humours, or from deposits of lymphy exudation. In favourable cases, the symptoms subside, often very quickly; the intolerance of light becomes less, the superficial redness disappears, the exuded matters are absorbed, and, in a first attack, the eye is restored to its healthy condition. In bad cases, the internal structures of the eye become permanently clouded, or utterly disorganized, and vision is lost for ever.

The chief peculiarity of the disease is that the most favourable cases relapse, or subsequent attacks recur. The disease may fly about from one eye to the other, and its duration extend over several weeks, or even months—each attack leaving the eye more and more damaged, until it exhausts itself in the utter destruction of the eye for all visual purposes.

Treatment.—This is a most provoking disease to treat, for when a case is to all appearances doing well, a relapse takes place, and matters are as bad as ever, or even worse; and when one eye makes a tolerable escape, the sound one is attacked in its turn. Such a feature is, however, unavoidable, and as much an essential of the disease as for catarrh to be attended with a running nose. Under allopathic treatment, the uselessness of bleeding, purges, fomentations, setons, blisters, eye-washes, &c., is admitted on all hands. As compared with it, homœopathy, without pretending to save every eye, may confidently avow its superiority.

The animal should be placed in a darkened box, and light kept carefully excluded until the intolerance of light is notably less. In the earliest period of the disease, when the animal is feverish, the pulse being quickened, the mouth dry and hot, &c., and when the lids are almost shut and

swollen, the membrane covering the eye injected, and the flow of tears copious, give *Aconite* and *Belladonna*, in turn, every two or three hours.

When the general feverishness is reduced, but the eye still remains inflamed superficially, and we notice a whitish or brownish appearance in the interior, give *Belladonna* and *Mercurius corrosivus*, in turn, every two or three hours, until the symptoms abate, when they may be given less frequently.

From the very outset and throughout the course of the disease until the attack is fairly over, and the eye is resuming its natural clearness, it is of the first consequence to apply to the outside of the eye, and also, if possible, under the lids, *Belladonna Lotion*, which is made by dissolving 2 grains of the extract in one ounce of water. Pour some into the hollow of the hand and apply several times a-day.

When the red and injected appearance of the eye is decidedly reduced, I would recommend *Mercur. cor.* to be steadily continued for some time, three or four times a-day, so long as any opacity of the cornea, or dimness of the internal humours, remains.

In relapsing, recurrent cases, attention should be paid to the ventilation and drainage of the stable, and the animal should be placed under a steady course of *Arsenicum*, 2 grains of the first trituration, three times a-day; suspending it, and resuming the above medicines, should acute or subacute symptoms return.

I would likewise suggest a trial of *Kali bichromicum.*

Dose.—10 drops of the above medicines.

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3. Cataract.

Cataract consists of opacity of the crystalline lens, or of its capsule, or of both. The lens is more frequently found opaque than the capsule. In health both the lens and its

investing membrane are perfectly transparent. The opacity may affect the whole or only a part of either of these structures.

The capsular variety of cataract is generally caused by inflammation, or by wounds or blows affecting the whole eyeball, or part of it. The opacity then comes on very quickly.

Opacity of the lens itself, although it may arise from the above causes, is usually found in old animals as the consequence of senile degeneration of tissue from imperfect nutrition, and in horses as a very frequent consequence of "periodic ophthalmia."

The opacity that supervenes on inflammation is more likely to be removed than the form produced by old age, which always gets worse and worse.

Cataract may affect both eyes, or only one. In old animals both eyes are usually cataractous, one wholly so, the other in part; whilst, if the opacity should have followed a blow or penetrating wound, the injured eye only is affected, and the other will remain sound until old age creeps on. As a rule, the blindness of old age depends on cataract.

Cataract is known by seeing behind the pupil an opaque body of a whitish-gray colour, which is best seen when the pupil is dilated by the previous application of *Atropin*. This preliminary step should always be taken in aid of correct diagnosis, when the case is doubtful. Of course, vision is more or less imperfect in proportion to the size and situation of the cataract. From the movements and behaviour of the animal, the inferences may be drawn that vision is better in the evening or in a subdued light, than it is in the full sunshine; and that it is improved so long as the pupil remains dilated under the action of *Atropin*.

Treatment.—No medicine can remove cataract, as far as I know. And in animals, an operation is practically useless.

4. Amaurosis.

Amaurosis, or gutta serena, is the name applied to a disease in which the optic nerve, or the brain, is so disordered as to give rise to imperfect sight. Amaurosis may be consequent upon some structural disease of the brain or of the optic nerve. It may follow a blow, or some other form of violence received on the head.

In gutta serena the eye is clear, bright, and transparent; the pupil is dilated, and the iris sluggish at first, immovable afterwards, as tested by the introduction of light into the eye. The movements of the animal show that there is partial or total blindness; he stumbles against every object in his way, and his whole gait is peculiar and characteristic.

Treatment.—Medicines have little or no effect on this disease. Attention should be paid to the general health.

CHAPTER XV.

DISEASES OF THE SKIN.

1. Warbles.

This name is applied to the swelling met with on the skin of the horse, from the gad-fly depositing its eggs in the skin; a tumour, often as large as a pigeon's egg, containing grubs and matter, being the result. The back and loins are the favourite places for the fly's operations. There may be several such swellings.

The treatment consists in cutting into each tumour, squeezing out its contents, and afterwards applying *Sulphurous acid* three or four times a-day. The grubs should be burnt.

2. Lice.

Various species of lice infest the skin of all the domesticated animals. Severe itching is set up, to relieve which the animal scratches himself until his skin is tender and sore. Filth and poverty are favourable for the development of lice.

There is a peculiar skin disease, named *Phthiriasis*, sometimes met with amongst horses where poultry are kept, from transmigration of a particular louse from the fowl to the

horse. The itching is so excessive, that the animal is constantly rubbing himself, stamping the ground, kicking his belly, biting his skin, and altogether in a very sorry plight. In consequence of the scratching, the hair is rubbed off, and the denuded surface is covered with blood, or various kinds of eruption. This louse may visit the groom.

The treatment of lousiness consists in burning infected bedding and clothing; in washing harness and brushes in hot water; in attending to thorough cleanliness; and in dressing *every part* of the hide with olive-oil, or, this failing, with *Sulphurous acid.* The eruption caused by the lice either disappears of itself after they are killed, or may be readily cured by giving the usual doses of *Arsenicum* three times a-day.

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3. Scabies, Itch, Mange.

The disease bearing these names arises from an insect or mite which burrows in the skin, and induces severe irritation, followed by various eruptions.

Itch in the horse, according to the greatest authority, Gerlach, is excited by three species of insects, namely, the *Sarcoptes equi*, which burrows in the skin; the *Dermatodectes equi*, which bites and fastens itself to the skin; and the *Symbiotes equi*, which penetrates no further than the superficial layer of the skin. The first closely resembles the *Sorcoptes* of man, both in its appearance, and in the general features of the eruption to which it gives rise. It can live on man, and excite an eruption, which is identical with that of human itch, and which may disappear spontaneously. Grooms attending "mangy" horses have been known to suffer from horse itch caused by the *S. equi.* Cattle also are affected by it, but experiments have as yet failed in transmitting it to sheep, dogs, pigs, and cats. The second parasite is the special itch insect of the horse, as, if trans-

mitted to the skin of other animals, it speedily dies. In the horse, it gives rise to itching, loss of hair, and a scurfy condition of the skin. The third is found in clusters especially about the horse's heels; then the animal rubs one leg on the other, stamps with his feet, attempts to bite the part, &c., and crusts of scurf form. It is also peculiar to the horse, and cannot live on other species.

In treatment, the object is to kill the parasites. First, wash the whole body thoroughly with soft soap and warm water; then dry the skin; and, lastly, rub in *Benzine*. These applications may have to be repeated more than once; but one thorough application is generally sufficient as far as the destruction of the parasites is concerned, and the remaining eruptions usually disappear without any treatment. *Sulphur Ointment* is another good remedy, washing being used as directed. The whole body should be subjected to these processes at the same time, because if one parasite escapes destruction, others will soon be bred.

The bedding should be burnt. The stable furniture and clothing should be thoroughly cleansed with soft soap and hot water.

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4. Vegetable Parasites.

The production of skin diseases in animals by low forms of vegetable life has not yet received that investigation which the interest and importance of the subject demand. It is, however, beyond doubt that our domestic animals are sometimes attacked with Ringworm, and that grooms attending on horses suffering from it have contracted the same disease. The eruption consists of a greater or less number of patches on different parts of the skin, circular in shape, partially or wholly bare of hair, and dotted with vesicles. Scales form on the surface of these patches, and on removing them there

is a slight moisture underneath. The hairs around are altered from their natural colour, and dusty.

There is a form of so-called "mange," which has been often observed where diseased straw has been used as bedding. A disease called "Camp Measles" has been observed in America in man, and has been ascribed to a fungus from diseased wheat-straw.

The treatment consists in applying to the patches *Sulphurous acid Lotion** three times a-day; in destroying infected bedding; and in giving *Arsenicum* in the usual doses, three times a-day. Liberal food should be allowed.

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5. Erythema.

This occurs from friction between folds of skin, such as between the thighs, in the armpits, &c. The chafing of harness also causes it. Discharges running over the skin, as urine, may excite it. Hot water, sweating, accumulations of dirt, favour this disease.

Another form arises mainly from pressure, as when horses are slung and when saddles and collars gall the skin of the back and shoulders. Hence the name *Saddle-gall.* When the pressure is continued, the skin in the middle of the injured part becomes hard and gristly, and in some cases is separated from the surrounding healthy skin by an ulcerated furrow. This is *Sitfast.*

Cracked Heels also belongs to this class. This very common disease of horses often arises from not properly washing and drying the heels, and especially if the horse be afterwards left in a draughty place. It is very apt to come on in frosty weather when the heels are not thoroughly dried, and also when poor horses are suddenly put on a liberal diet. The symptoms are plain enough. The animal is lame and

* See list of local applications.

in pain. One or more of the heels is found painful, hot, and swollen. The skin cracks and fluid exudes. In bad or neglected cases, deep ulcerations form, and the legs swell.

Another form of acute erythema has received the expressive name of "mud fever." It was unusually common during the wet winter of 1871, amongst hunters and carriage-horses, and was caused by the irritation of mud and wet, acting on the legs, thighs, and surface of the belly, which are covered with patches of inflammation. At the same time, much febrile disturbance is present, the animal is more or less stiff and lame, the hair and skin fall off in patches, and the general condition becomes unthrifty. The backs of the knees, and the bend of the hoch and pastern joints, sometimes become the seat of slight suppuration.

Treatment.—When the disease arises from friction and irritating discharges, the part must be thoroughly cleansed with tepid water and well dried, and then dusted with powdered starch, or fuller's-earth. When the cause is pressure, the saddle or collar should be altered in such a way as to fit better, and *Arnica Lotion* applied frequently. In sitfast, the hardened skin may have to be cut out, in which case the resulting wound should be dressed with *Calendula Lotion ;** if not, apply *Arnica Lotion.* For cracked heels, clip the hair close to the skin, foment if there is pain, poultice with bran if there is pain and discharge, and if there is ulceration apply *Sulphurous acid** night and morning. At the same time, give 10 drops of *Arsenicum* or of *Sulphur* three times a-day, and feed on mashes, boiled oats, hay, and carrots. Chapped teats will readily heal after a few applications of *Sulphurous acid* with a camel's-hair pencil.

* See list of local applications.

6. Urticaria,

Or nettle-rash, known as "surfeit," arises from indigestion, over-fatigue, and exposure to wet after a long journey. It is recognised by the sudden appearance of blotches, or elevations of the skin, varying in size from a sixpenny-piece to that of one's hand, on different parts of the body. There is considerable heat of the skin, and itching. In mild cases, the general health is not affected, and the eruption does not continue long; whereas in others, there is some amount of feverishness, and the elevations are prone to reappear at intervals for some time.

The treatment consists in giving mashes, but no corn, for a few days, and in giving *Aconite*, *Antimonium crudum*, *Rhus*, or *Arsenicum*—the first medicine for feverishness; the second, when the disease is associated with indigestion; the third, when it is the result of cold; and the fourth, in obstinate, or relapsing cases.

Dose.—*See page* 13.

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7. Lichen.

Pimply eruptions are very common in horses. On stroking the skin with the point of the fingers, especially over the neck, shoulders, and hind-quarters, a lot of hard, gritty bodies are felt. On scratching one of these pimples with the nail, we find that the top of it peels off as scurf. These pimples are as large as a hemp-seed; generally break out in spring; are of long duration and most difficult to cure. There is usually some itching and rubbing. Irritation and disorder of the stomach, drinking cold water whilst the body is heated, and sudden exposure to damp and cold, are the chief causes.

In treatment, *Nux vomica* or *Antimonium crudum* are required when there are symptoms of indigestion.

Belladonna is required in those cases of papular eruptions which are attended with heat of skin, some feverishness, and great itching. *Arsenicum* proves of great service in all papular eruptions. *Sulphur*, also, is a valuable remedy.

Dose.—*See page* 13.

If there be reason to believe that parasites are the cause of the eruption and itching, dress with *Sulphur Ointment*,* or *Sulphurous acid Lotion*,* night and morning.

Attention must be paid to diet and exercise.

8. Prurigo.

This disease is signalized by small pimples, heat of skin, and particularly by excessive itchiness. The horse rubs his neck, root of the tail, mane, against the wall, edge of the manger, or anything else, until the skin is red raw, and covered with small clots of blood. In some cases, the itching is intolerably severe, and the animal bites and rubs himself furiously. The legs are often mainly affected, and then he rubs one against the other, stamps impatiently, tries to nibble them, &c. Many of these cases depend upon a plethoric condition of the system, the result of over-feeding and want of exercise. Others are connected with the presence of parasites, and others are dependent on an excitation of the nerves distributed to the skin. In this latter case, there may be no primary eruption whatever, and those that arise secondarily are wholly due to rubbing and biting.

For treatment, refer above to "Lichen."

* See list of local applications.

9. Eczema.

When fully developed, diseased patches, varying in size and irregularly circular, are observed on different parts of the body. On the surface of these inflamed patches are clusters of small vesicles from which a serous fluid exudes, which presently concretes into scabs, and mats the hair together. In a few days the scabs and hair fall off, leaving the skin bare, inflamed, and moistened with exudation. Thin scales form from the drying of this exudation. There is usually considerable and violent scratching and rubbing from the itchy sensation, in which case the diseased surface is covered with some small clots of blood, the result of slight laceration of the skin.

TREATMENT.—The best remedies are the following:—

Aconite is indicated for febrile symptoms; itching over the whole body, hot and burning skin; small reddish-coloured vesicles, with itching.

Rhus, for redness of the skin over the whole body; swelling of the skin, with an itchy eruption of small, yellowish vesicles, which run into each other and become moist; a scurfy and fissured state of the skin.

Mercurius, for an eruption at first vesicular, afterwards pustular, which is sometimes dry and sometimes moist, and which itches worst under the influence of warmth.

Arsenicum, for burning heat and itching of the skin; scales, which peel off; reddish-coloured pustules, which break, and leave the appearance of small, shallow ulcers, with an ichorous discharge; painful blotches.

DOSE.—*See page* 13.

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10. Impetigo.

The chief variety of this class of skin disease occurs in horses, and is called "Grease." It consists of inflammation

of the skin at the back surface of the fetlock and heels, followed by the formation of pustules, on the bursting of which there is a copious mattery discharge.

This is an inherited disease—often "runs in the family." Coarse-bred horses and those with much hair on their legs are more subject to it than well-bred horses, the difference being probably due to better grooming and attention in the one than in the other. Exposure to damp and cold, and dirt, are the exciting causes. One form of grease depends on a specific contagious fluid.

A swelling appears in one or more legs, the hind more frequently than the fore; this swelling may extend as high as the knees, or hocks. The skin is hot, red, and painful, and the animal is more or less stiff and lame in his movements. In a short time, clusters of small vesicles arise on the skin at the heels containing a clear fluid, which, if it be specific, has the property, when inoculated on oxen and human beings, of exciting an eruption like that of vaccine matter. If the fluid be not specific, it has no such property. The vesicles subsequently become pustules, which contain matter. When these break there is a more or less copious discharge of an offensive character. This discharge mats the hairs together, and dries into scabs. Still later, the skin cracks into deep fissures, from which a mattery discharge issues. The leg above the heel is much swollen and painful, and the cracks may extend upwards. The diseased surface, in the most advanced stage, becomes covered with large unhealthy granulations, or "proud flesh," which from their appearance are known as "grapes." In the worst cases, what with the grapy condition of the leg, its considerable increase in size from swelling, the copious and offensive discharge, and the lameness present, the animal is in a sorry plight and not pleasant to look at. In some cases, "canker" of the foot is present as a consequence or complication, and in others of confirmed grease the parasites of the itch disease abound.

Treatment.—In the treatment of this disease, it is most important to keep the part perfectly clean by washing night and morning with lukewarm water and glycerine or petroleum soap, afterwards drying thoroughly with a soft cloth. If there be much offensive discharge and scabs, poultice with boiled carrots or turnips once or twice until the surface is clean. Mashes, carrots, and green food are useful as a change in the diet, and too much corn should be cut off. *Arsenicum*, 10 drops three times a-day, will, aided by the above measures, often arrest the disease in its early stage, or prevent it from going on to the ulcerated and grapy condition. *Sulphurous acid Lotion** should be used thrice daily as soon as the skin cracks, and especially if you suspect the presence of the itch parasite. In some cases, I have used *Arsenical Lotion** with good effects.

11. Warts.

One of the best local applications is strong tincture of *Thuja*, put on with a camel's-hair pencil night and morning, and steadily persevered with. The best internal remedies are *Thuja* and *Calcarea carbonica*—10 drops for horses night and morning. Some require to be cut off.

12. Mallenders

Is the common name for a scurfy or scaly disease (psoriasis) situate on the skin at the back part of the bend of the knee.

Sallenders is the same at the front of the bend of the hock.

In treatment, after softening the scales with warm water and soap, apply *Thuja* night and morning, and give *Arsenicum* or *Thuja* in 10-drop doses at the same times.

* See list of local applications.

13. Management of the Skin.

Fine Coat.—A fine glossy coat, which so much enhances the horse's good looks, requires time and skill on the part of the groom. A certain amount of warmth from comfortable but not close stabling, and sufficient clothing, cause the hair to become fine and to lie smoothly. Thorough cleansing of the skin with brush and cloth is, of course, indispensable. In addition, the occasional use of carrots, boiled turnips, boiled barley, or linseed, will be found to aid the above measures. When the coat stares and looks unthrifty, the state of the digestive organs should be investigated, and if found out of order, treated as directed in a previous part of this work. *Antimony* and *Sulphur* are favourite drugs with many to gloss and satinize the skin, but they are apt to cause sweating, and to make the animal susceptible to cold and changes of the weather. For these reasons, they often do more harm than good. Small doses of *Arsenicum*, such as 2 grains of the first trituration night and morning, will be found free from danger, and of great value in this respect.

Clipping.—Shortening of the hair is performed either with scissors and comb, or with a newly-invented machine, which acts well and quickly. The operation is usually confined to hunters and other horses used for quick work, and is generally performed after moulting and at the beginning of winter. Warm clothing both in and out of doors is required for some days after clipping, as there is great risk of catching cold. The horse should be clipped who is not in thorough health. Much has been said and written for and against clipping. It all comes to this, that a working horse with a thick wet layer of hair over its body is more subject to coughs, colds, lung disease, and death, than one whose skin can be kept dry and warm by proper care and clothing. The Irish plan is to clip off all the hair, save that of the legs.

Another is just the reverse of this, namely, to clip the legs, but not the body.

Singeing.—By this process, the long hairs about the neck, jaws, throat, and belly are removed. Frequently, singeing is done all over, to take the place of clipping. It has the advantage over the latter, of not so suddenly and so completely depriving the skin of its natural protection; but, on the other hand, the flame of the apparatus is apt to frighten many horses, and a clumsy operator may burn or disfigure some part of the surface.

CHAPTER XVI.

DISEASES NOT CLASSIFIED.

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1. Glanders and Farcy.

These are the names for two forms of the same disease—glanders affecting the nasal cavities, and farcy the absorbents. This is proved by the fact that inoculation with the pus of either disease will produce the other. The disease is essentially a constitutional cachexia, with local manifestations in the nose or absorbents, or in both.

In the horse tribe, it arises spontaneously from poor feeding, over-work, ill-ventilated stables, and other causes of a similar kind, which are notoriously capable of engendering putrid poisons. It is also communicable to other animals by inoculation.

Acute Glanders arises suddenly with symptoms of high feverish excitement. The pulse and breathing are quickened. A copious, offensive, mattery discharge runs from the nose. The nasal membrane is seen to be congested and extensively ulcerated. In some cases incipient farcy-buds appear on different parts of the skin in the form of small, hard tumours. Death speedily follows.

Chronic Glanders is more frequent than the acute form. It is characterized by a watery discharge from one or both nostrils, usually only one, and in the majority of cases the

left; subsequently, the discharge is glairy, like white of egg; and still later, mattery, bloody, gluey to the touch, and horribly stinking. It is seen sticking to the orifice of the nose. The discharge runs constantly. An enlarged and hard gland is felt adherent to the inner surface of the lower jaw on the side corresponding with the diseased nose. One or several ulcers are seen on the nasal membrane, with sharp edges and scooped-out bases, penetrating deeply and widely, until even the bone is eaten into. If the ulcers are situated high up, they will be beyond the reach of vision. The nose is also studded with small elevations, which subsequently break out into ulcers of the above character. Sometimes a horse will live a long time with such symptoms and have fair health; but usually, at this stage, unhealthy inflammation, followed by abscesses, takes place in the lungs. Quick breathing, cough, rapid wasting, and rattling heard on applying the ear to the sides, characterize this termination.

Chronic Farcy begins with inflammation of the lymphatic vessels and glands. The swellings, known as *farcy-buds*, are hot, hard, and painful, and are seated either in glands, or at the valves of the lymphatic vessels, on any part of the surface, such as the face and lips, but especially on the legs. Running between these swellings hardened cords are felt, which are the inflamed absorbent or lymphatic vessels. Subsequently, when these swellings suppurate, the skin breaks, unhealthy sores remain, and a thin, copious, sanious discharge flows. Eventually glanders comes on.

Acute Farcy does not differ from the chronic, except in being more rapid in its progress, in the attendant constitutional disturbance being greater, and in the almost invariable coexistence of glanders.

Treatment.—I cannot agree with those who tell us that this disease is absolutely incurable. Acute cases, or the chronic forms occurring in old, worn-out horses, generally

end fatally; but not so others, if treated as I shall presently point out.

As soon as the disease is discovered—and all nasal discharges should be looked upon with suspicion—the animal should be separated from other horses, and placed by himself. The stall and stable utensils should be thoroughly cleansed and disinfected. No man with a broken skin should touch a glandered or farcied horse.

The sovereign remedy for glanders and farcy is *Kali bichromicum*—a drug which I was the first to recommend and use in this disease. At the present time I dissolve one grain of it in twelve fluid ounces of water, and give a wineglassful of the solution three times a-day. Locally, I apply night and morning to farcy-buds a solution consisting of one drachm of *Kali bichr.* and sixteen ounces of water.

The following out of a large number of cases thus treated —cases of unquestionable glanders and farcy—establish my assertions:—

Case 1.—A six-year-old horse, used in a team of three. One, if not two, of his former companions have, I learn, died of farcy under other treatment. For several weeks this horse had been under allopathic treatment without receiving any benefit. He was brought from the establishment of an allopathic veterinarian, and placed under my care. The right side of the mouth was one mass of farcy-buds, a number of which had coalesced and formed a large open sore; from this numerous buds proceeded along the jaw and terminated in the region of the submaxillary gland; this gland was enormously enlarged, and bulged beyond the ramus of the lower jaw, to which it was in close opposition; the hair was rough and staring; and the appetite deficient. Under the use of *Kali bichrom.*, applied topically and given internally, the horse was cured in a month and went to his usual work.

Case 2.—This horse was affected exactly like the last. The disease affected the left side, and had not been previously under other treatment. He was cured by the same means.

CASE 3.—Another horse affected in every respect like case 1, was cured like it in a very short time by the same remedy.

CASE 4.—The disease affected the right hind leg of the horse. The leg first swelled, and then the buds appeared on the pastern and fetlock joints; they extended upwards around the whole of the leg as high as the tarsus, and on the inner surface of the groin. The buds, in various stages of development, were so numerous that they could not be counted. The local and internal use of *Kali bichrom.* effected a cure in a very short time.

I have never seen nor heard of such results from allopathic treatment.

All these horses have been at regular work since their illness, now sixteen months since, and no one can tell they ever had farcy. Two of them have been examined by Professors Spooner and Varnell, and pronounced sound, excepting that one was a roarer. He was so before the attack of farcy.

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2. Rheumatism.

Acute Rheumatism is a febrile disease, attended with inflammation of the structures surrounding the joints, or of the lining membrane of the heart, or of the sac enclosing the heart. Some horses are more subject to it than others, owing to constitutional peculiarity, or hereditary predisposition. It is directly excited by exposure to damp and cold, either during health, or during convalescence from some catarrhal or pulmonary attack.

Sudden lameness is the first most marked symptom; it occurs in one or more legs, and in one or other joints—shoulder, stifle, hock, pastern, hip, &c. The affected joint, or joints, are hot and tender to the touch, and swollen. The animal stands still and is very loth to stir a step. The breathing and pulse are both quickened—the latter also full and bounding. Judging from the animal's manner, there is severe pain in the part. The bowels are active, the tongue furred, and the saliva sour to the smell. There is a marked

tendency to one joint being affected after the other, the disease often returning to the one first attacked. Above all, the heart and pleura are apt to be involved, in which case the gravity of the attack is greatly increased. In fatal cases, death from exhaustion, or from incurable lesion of the heart, comes on suddenly.

Chronic Rheumatism is of the same nature as the acute, but the symptoms are much milder in character, and of longer duration. It is characterized by sudden lameness, of one leg to-day, and another to-morrow, especially after exposure; and there may or may not be some swelling, heat, and pain in one of the joints of the leg. After cure, it is apt to reappear, and may continue more or less for months. It arises either as an independent affection, or as the result of an acute attack—most frequently the former.

Lumbago is rheumatism of the lumbar fascia, and an animal thus attacked is said to be "loin-bound." *Pleurodynia* exists when the disease affects the muscles between the ribs and the fibrous fascia lining the chest. The horse is said to be "shoulder-tied," or to have *chest-founder*, when the fibrous tissues about the shoulder are the seat of rheumatism. Lastly, cases are occasionally met with not unlike human sciatica.

TREATMENT.—*Aconitum* is indicated at the beginning of the attack, when there are symptoms of febrile excitement; and also when the general symptoms and physical signs point out heart complication.

Belladonna, when the affected parts are extremely tender to the touch, and painful when moved, causing lameness. It is specially suitable when the shoulder is the seat of the disease.

Bryonia is indicated in cases of acute rheumatism, particularly of the legs, attended with frequent full pulse, thirst, high-coloured urine, pain aggravated by motion.

Nux vomica is frequently beneficial when the stomach is

out of order and the bowels costive, and in those cases which are attended with symptoms of paralytic weakness of the muscles of the legs.

Rhus is another remedy which is attended with good results in those cases where the animal appears to have lost the muscular power of the legs, and when the muscles of the back are principally affected. Also, when there is stiffness on first moving, and when the lameness is less after exercise.

Arnica, *Arsenicum*, *Mercurius*, and *Sulphur*, are also indicated in certain cases.

Dose.—*See page* 13.

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3. Myalgia.

In this disorder the muscles are the seat of pain. Horses are affected with it after racing, hunting, or any other severe or long-continued exertion. *Soreness and stiffness* express the same state in man. Usually, the pulse and breathing are little, if at all, disturbed, except after exertion, or when there is considerable pain. When the muscles of the chest and shoulder are principally affected, the disease resembles rheumatic pleurodynia, or spraining the shoulder, in which latter case the horse walks down hill with great pain and difficulty, but up hill with comparative ease. Pressure of the affected muscles shows that there is great tenderness. Myalgia may be confounded with chronic rheumatism, from which, however, it chiefly differs in not attacking fibrous structures, or those entering into the formation of joints—in usually following severe exertion, or from a horse being over-weighted—and in the shifting character of rheumatism being absent.

The best remedy is *Arnica*—10 drops every four hours.

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4. Purpura Hæmorrhagica.

This disease depends upon some unascertained alteration in the blood, or bloodvessels, or both, which allows the blood to escape into the structure of the skin, into the tissues under the skin, and into the internal organs, and cavities, and ducts.

The causes are believed to be those which are calculated to lower vital power, or to impair the process of blood-making (sanguification), such as close, ill-ventilated, damp stables; overwork; bad or scanty food, &c. I have noticed that in the majority of cases, the symptoms of purpura have been preceded, at a longer or shorter period, by a catarrhal affection.

The pulse ranges about 60, and is full; the breathing about 20 per minute. Swellings of variable size and irregular outline, and consisting of effused blood, suddenly appear under, or in the skin, in different parts of the body—especially the legs. The swelling of the legs about the hocks and knees is often enormous, and ends abruptly at the stifle and elbow joints. The lips and nostrils are much swollen, tense, and shining. The openings of the nose are often so much narrowed as to cause some difficulty of breathing. On examining the nasal membrane, it is found very red and studded with purple spots, which vary much in size, from a shilling downwards.

The inside of the lips is likewise covered with similar spots. If one of them be pricked, fluid blood exudes.

Usually, in a day or two, the pulse becomes weaker, the urine high-coloured, and further extravasations occur, unless the attack takes a favourable turn. The wellings, which at first have a well-defined margin, which is gradually lost in the adjacent skin, extend to the breast, flank, belly, quarter, &c.; the membrane of the eye is bloodshot; a dark, bloody fluid, alone or mixed with matter, flows from

the nose; the nasal membrane becomes black, and the former spots slough off, and the tissue is seen hanging in shreds. The patches of swelling on some part of the body become cold, hard as a board, insensible to feeling—die, in fact, and shortly slough off, leaving raw, unhealthy sores. Other patches, especially those under the belly, exude a fluid, which may be seen hanging in drops on the hair. There is also in severe cases a discharge of blood by the urine, either mixed up with the urine, or passed in small clots. In addition, the animal is weak, eats little or nothing, and cannot move his legs, from the swelling preventing bending of the joints.

Treatment.—I have tried several medicines, but now I never use any other than *Kali bichromicum*, which I regard in the light of a specific from its remarkable power over this disease.

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5. Lymphangeitis, or Weed.

Weed is one of the common names for a rather frequent disease in horses, consisting of inflammation of the lymphatic vessels and glands of the legs, especially a hind one. It is most frequently observed in cart-horses, and is caused indirectly by errors of feeding and directly by injuries, exposure of the legs to damp and cold, &c. I have noticed that many horses are attacked on a Monday morning, after the previous day's rest.

Usually the attack comes on suddenly with a shivering fit, followed by feverishness—quick pulse and breathing, hot, dry mouth, &c. The affected leg is raised from the ground, and the horse frequently looks round to it, as if to tell where his pain is. The leg on examination is found to be hot, swollen, and tender to the touch. On the inner side of the thigh and leg, we discover a hard, painful, cord-like

enlargement along the course of the lymphatic vessels, with here and there several enlarged glands, or valves in these vessels. The swelling of the vessels and leg begins in the groin at the bend of the thigh, and gradually creeps downwards along the inner surface of the leg, as far as the hock-joint or even to the fetlock. The tumefaction of the leg pits on pressure, and in severe cases an amber-coloured fluid oozes out from the skin, and stands in drops on the hair. One attack predisposes to subsequent ones, and the leg is left permanently enlarged.

TREATMENT.—I have treated many cases of both these diseases, and at the time I write have just seen several improve rapidly. Several remedies have been employed, but of late Barely exclusively on *Kali bichromicum*, 10 drops every three hours. I also cause *Kali bichrom. Lotion** to be rubbed in night and morning. In some cases, I first give a few 10-drop doses of *Aconite.*

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6. Cellulitis.

This disease, I believe, I was the first to describe in my "Veterinary Homœopathy Illustrated." It is often confounded with weed, from which it may be distinguished by the absence of the enlarged vessels, valves, and glands in the inside of the thigh; by the swelling first appearing in the fetlock and extending *upwards* to the hock, sometimes to the thigh; by its attacking a hind-leg; and by the skin breaking at the most prominent part of the swelling, and giving vent to a large quantity of foul matter. A slough is cast out from the opening, and a deep, unhealthy ulcer remains. At the same time, the animal is feverish and his breathing quickened; the fæces hard, and coated with mucus. The leg is excessively painful to the touch, and

* See list of local applications.

frequently so hard that the swelling does not pit on pressure with the finger. One attack, like weed, predisposes to subsequent ones, and the leg is left permanently thickened.

TREATMENT.—I give a few doses of *Aconite*, 10 drops every three hours. Then *Kali bichromicum* as directed for weed; also rubbing in the lotion of the same drug. The result is rapid recovery.

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7. Strangles.

The disease which bears this name is of a febrile character, attended with suppuration and abscesses in the areolar tissue under the jaw. This is the definition of what is called "simple" strangles. In the "irregular" or "bastard" kind, besides the fever, we meet with suppurative inflammation under the jaw, in external and internal lymphatic glands, and under the skin in various parts of the body.

Strangles attacks young rather than aged horses, prevails at some seasons more than others, and rarely occurs a second time in the same animal. Its causes are ill understood. The constitutional changes connected with teething are generally regarded as a powerful predisposing cause.

A horse is said to be "breeding strangles," when the coat is unthrifty, the skin hide-bound, the general condition below par, and the flank tucked up, and when he looks languid, coughs more or less, and the growth is arrested or advances tardily.

The actual attack begins with symptoms of cold, such as loss of appetite, sore throat, inability to swallow, cough, discharge from the nose, dribbling of mucus from the mouth, quickened pulse, &c. The space under the jaw is hot, and swollen on one side or in its whole extent. The breathing is more or less obstructed and difficult, being attended with a loud trumpety sound, either during inspiration or ex-

piration, or both, and simulating strangulation—hence the common name of the disease.

In the more severe form, abscesses appear about the neck, breast, shoulders, legs, &c., and when they break or are opened, discharge unhealthy matter. They are accompanied by irritative fever, rapid wasting, debility, failure of appetite, swollen legs, &c. In unfavourable cases, the disease ends fatally from glanders, diarrhœa, or exhaustion.

The parts about the jaw and neck should be well fomented with hot water three times a-day, and a large poultice put on afterwards. Abscesses should be opened as soon as matter is ripe, provided they show no tendency to burst of themselves. Poultices are still to be applied, to encourage discharge, and the place of exit is to be kept thoroughly cleansed. In all cases, the horse should be placed in a well-ventilated stable or box, and have generous diet. In some cases it may be necessary to open the windpipe, if danger of suffocation threatens. After recovery, growth goes on more satisfactorily than before, but it is especially necessary not to expose the convalescent to cold or hard work, and to give a liberal allowance of the most sustaining and invigorating food.

With respect to medicines, *Belladonna* and *Mercurius* should be given alternately every four hours, as soon as the throat symptoms and swelling under the jaw appear. *Hepar sulphuris* is required to hasten suppuration in the first stage, and to promote healing in the second. In the typhoid or hectic condition, with wasting, &c., *China* or *Arsenicum* are the best.

Dose.—*See page* 13.

MATERIA MEDICA.

1. List of the Tinctures.

Names.	Dilutions.	Names.	Dilutions.
Acidum Phosphoricum	1	Iodium	1
Aconitum Napellus (or Aconite)	1	Ipecacuanha	1
Ammonium Causticum	1	Kali Bichromicum	1
Antimonium Crudum	6	Kali Chloricum	1
Arnica Montana	1	Kreosotum	1
Arsenicum Album	2	Mercurius Corrosivus	6
Baryta Carbonica	6	Mercurius Vivus	5
Belladonna	1	Nux Vomica	1
Bryonia Alba	1	Opium	1
Calcarea Carbonica	6	Phosphorus	1
Calendula	1	Phytolacca Decandra	1
Cantharis	1	Podophylin	1
Chelidonium Majus	1	Pulsatilla	1
China	1	Rhus Toxicodendron	1
Colocynthis	1	Secale	1
Digitalis Purpurea	1	Silicea	6
Drosera Rotundifolia	1	Stannum	6
Euphrasia	1	Sulphur	1
Hamamelis Virginica	1	Tartarus Emeticus	3
Hepar Sulphuris	6	Terebintha	1
Hydrastis Canadensis	1	Thuja Occidentalis	1
Camphor.			

2. List of Triturations.

Arsenicum Album	1	Mercurius Vivus	1
Ferri Sulphas	1	Nux Vomica	1
Ferrum	1		

The usual dose of the tinctures and triturations will be found stated at page 13.

The reader will of course understand that the above lists do not comprise *all* the medicines used in actual practice, nor does the number attached to each medicine in the lists represent the invariable dilution. In other words, I have given only those medicines and dilutions which are the best against ordinary attacks of disease. Higher or lower dilutions may be required in special cases, and other medicines may be called for under exceptional circumstances.

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3. External Applications.

This class of remedies includes certain specified drugs which are applied to the external surface of the body, in local affections, or injuries, for three distinct purposes—*firstly*, to assist the operation of the given drug when it is administered internally at the same time; *secondly*, to obtain a disinfectant or antiseptic action in cases of unhealthy ulceration, or sloughing; and, *thirdly*, to destroy vermin.

The following is a list of these applications and their principal uses:—

Aconite Lotion.

Mix 1 fluid ounce of *Tincture* with 15 of water.

Used in laminitis—page 33.

Arnica Lotion.

Mix 1 fluid ounce of *Tincture of Arnica* with 15 of water.

Used in all kinds of injuries caused by mechanical violence, such as falls, blows, &c.; in fractures, dislocations, bruises; to wounds after operations; to pricks of the feet, corns, &c. In the last cases, a piece of tow soaked in the strong tincture should be applied; and a bran poultice may be medicated with the same or with some of the lotion.

Calendula Lotion.

Mix 1 ounce of *Tincture of Calendula* with 15 of water.

Used in cuts, lacerations, flesh-wounds, &c. When the wound

is irritable and inflamed, and a poultice is required, add to it two or three wineglassfuls of the lotion.

Rhus Lotion.

Mix 1 ounce of *Tincture of Rhus* with 15 of water.

To be well rubbed into the seat of sprains of ligaments or tendons, and in some forms of local rheumatism.

Kali Bichromicum Lotion.

Dissolve 1 drachm of the salt in 16 fluid ounces of water.

To be rubbed over farcy-buds, the enlargements of weed and cellulitis; also very efficient in capped hocks, after *Arnica Lotion.*

Ruta Lotion.

Mix 1 ounce of *Tincture of Ruta* with 15 of water.

Used in some cases of distension of joints, or bursal sacs, resulting from sprains. To be rubbed in.

*Arsenical Lotion.**

Boil 4 grains of *Arsenious Acid* in a pint of distilled water.

Used in some forms of cracked heels, grease, and mange.

*Mercurius Corrosivus Lotion.**

Dissolve 1 drachm of *Corrosive Sublimate* in 16 ounces of hot water.

Used as an injection in fistulas, quittor, &c.; in the reduction of splints, bone-spavins, ring-bones; in thickening of the sheaths of tendons; and in some parasitic diseases of the skin. When rubbed in, the skin gets tender and scurfy in a few days; it should then be discontinued for a day or two, and the part rubbed with oil, and washed well with soap and water; then resumed.

* To prevent accidents with these two applications, the bottles containing them should be labelled "**POISON**;" and, when not used, locked up.

Borax Lotion.

Borax, 1 drachm; *Glycerine*, 1 ounce; water, 12 ounces.

Useful in certain skin diseases, attended with severe itching and scratching, and unconnected with parasites; also, in otitis.

Iodine Lotion.

Tincture of Iodine, 1 to 2 fluid drachms; water, 16 ounces.

Used in vaginal discharges.

Kali Chloricum Lotion.

Kali Chlor., 2 drachms; *Glycerine*, 8 fluid ounces; water, 8 ounces.

Used in grease, &c.

Belladonna Lotion.

Extract of Belladonna, 2 grains; water, 1 ounce.

Used as a local application in periodic ophthalmia.

Hydrastis Injection.

Tincture of Hydrastis, 1 ounce; water, 16 ounces.

Used in nasal discharges; vaginal discharges.

Sulphur Ointment.

Sulphur, 1 ounce; lard, 6 ounces.

Used in parasitic skin diseases, and pimply eruptions with itching.

Sulphurous Acid and Lotion.

Used pure in malignant putrid sores and unhealthy ulcerations; and, diluted with equal parts of water or of *Glycerine*, in certain skin diseases.

Hydrastis Inhalation.

1 drachm of the powder; water, 1 quart.

Used in nasal discharges.

Thuja (Undiluted Tincture).

Used for warts, applied externally—page 134; and in mallenders—page 134.

Powdered Slaked Lime.

Used in open joints—page 18.

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4. Chief Uses of the Medicines.

It is not my intention to give in this place a full account of the different uses to which the medicines prescribed in this work may be applied, but only to point out a few of the more prominent diseases or symptoms for which each one of them is suitable. To do more than this would be to enter on considerations that might detract from the practical character of this treatise.

The reader will find under "Bryonia" that it is indicated in diarrhœa. He should then turn to page 66, where he will find the symptoms given for its selection. So with other medicines.

Acidum Phosphoricum.

This acid is not much called for against equine diseases. Its use is limited to some cases of diabetes and diarrhœa, and it is sometimes indicated in caries (ulceration of bone).

References.—*Pages* 68, 75.

Aconite, or Aconitum Napellus. (*Monkshood*).

This drug, from its success in controlling inflammatory affections, has been termed the homœopathic "lancet." It is especially called for during the cold and hot stage of simple inflammatory fever, before the inflammation has become localized. Given at this early stage, the disturbance to the circulation is almost always put right, and vital organs saved from congestion and structural disease. It is the most reliable simple remedy in acute rheumatism, in which it both calms the general febrile excitement, and resists the destructive action of the rheumatic poison on the heart and joints. In inflammation of the feet, it is often sufficient in itself to re-

duce local congestion and pain, and prevent the effusion which so often destroys life, or leads to malformation under other treatment. In short, there is no organ acutely inflamed which may not call for its use, either alone, or in alternation with another remedy, having a more distinctly specific relation to the individual part involved.

In spasmodic affections, such as colic, lockjaw, tetanus, &c., its power is also well shown. It often cures colic cases in a few minutes. Hot and dry skin; shivering; thirst; quick hard pulse; quick, anxious, and laboured breathing; short, dry cough, especially indicate this remedy.

For external use, *see page* 149.

References.—*Pages* 18, 19, 28, 33, 45, 50, 64, 67, 69, 70, 71, 74, 77, 78, 79, 82, 83, 84, 85, 86, 87, 89, 95, 98, 101, 102, 103, 104, 110, 111, 114, 115, 119, 122, 130, 132, 141, 145, 146.

Ammonium Causticum.

This is perhaps the most valuable drug that can be employed in two kinds of diseases from which horses frequently suffer, namely, lung diseases and colic. In the former, it is most successful in the stage of chill, when the lungs are congested, and the breathing quick and laboured; in the latter, it should be given at once in preference to all other drugs, and only superseded by another when decided relief is not obtained with a few rapid doses.

References.—*Pages* 64, 95, 97, 100, 103, 105.

Antimonium Crudum.

In the form of indigestion which I have described at page 57, this remedy proves quickly curative. It is also useful when the tongue is loaded with mucus, and the fæces are glazed with the same material.

See also page 130.

Arnica Montana. (*Leopard's Bane.*)

This remedy is indispensable in veterinary practice, in which the results of mechanical violence have to be so often treated. The consequences resulting either to the part injured, or to the constitution generally, from strains, blows, falls, thrusts, bruises, &c., are happily met by *Arnica.* For the muscular pain and lameness following severe or long-continued exertion, as after racing, hunting, &c., *Arnica* is highly beneficial.

For its external employment, *see page* 149.

References.—*Pages* 17, 18, 19, 20, 23, 24, 25, 27, 28, 32, 35, 44, 45, 47, 74, 80, 84, 85, 86, 88, 104, 114, 119, 141, 142.

Arsenic. (*Arsenious Acid.*)

In veterinary practice, *Arsenic* is most used against disorders of the mucous membranes and of the skin. Hence, it is of signal service in influenza, catarrh, and certain forms of bronchitis, which are attended with feeble pulse, exhaustion, and wasting. It produces speedy improvement in some cases of chronic discharge from the nose; and in quick breathing from chronic lung disease, its persistent use is frequently beneficial. In chronic purging with loss of strength and flesh, it may be given with hopes of success, unless when extensive ulceration exists. Most skin diseases succumb to it, and its value in "satinizing" the skin, and thus improving the horse's appearance, is well known. It likewise improves appetite and helps to get an unthrifty horse into good condition. In swelling of the legs, and of the skin of the belly, it is one of the foremost remedies. So also in inflamed eyes, with swelling of the lids.

For external use, *see page* 150.

References.—*Pages* 32, 45, 53, 57, 58, 60, 66, 68, 72, 76,

89, 92, 96, 101, 105, 106, 107, 111, 114, 122, 128, 129, 130, 132, 133, 134, 141.

Baryta Carbonica.

Used in some cases of diabetes insipidus.—*Page* 76.

Belladonna. (*Deadly Nightshade.*)

This drug will be found suitable for inflammations of the conjunctiva, when the eyes look red, the eyelids swollen, and tears flow freely. In inflamed sore throat, with general febrile disturbance, pain and difficulty in swallowing, external tenderness and swelling, *Belladonna* is alone sufficient to meet most cases. When the glands about the neck are swollen and painful, as in strangles, mumps, &c., it renders good service. Inflammatory swellings, as poll evil, require its use, usually alternately with *Arnica*, when resulting from injuries. Dry, irritating coughs, presumably from throat irritation, are quickly removed. In the cerebral excitement of staggers, in enteritis, in scarlatina, and in inflammatory skin diseases without discharge, it will often be found highly beneficial.

For external use, *see page* 151.

References.—*Pages* 20, 46, 47, 49, 54, 69, 82, 89, 95, 98, 107, 114, 115, 119, 122, 130, 141, 147.

Bryonia Alba. (*White Bryony.*)

In acute rheumatism, after *Aconite* has been given, or alternately with it, *Bryonia* comes in to bring the case to a successful issue. Whether the rheumatism attacks muscles or is located in joints, this drug is equally indicated. In inflammation of serous membranes, such as pleurisy especially, *Bryonia* is indispensable in the stage of effusion. The same remark applies to peritonitis. In congestion of the

liver, with yellow eyes and lameness, *Bryonia* gives good results. Catarrh beginning in the nose and travelling downwards to the lungs, and attended with dry, shaking cough, and rattles in the trachea and larger bronchial tubes, requires this remedy. There are some kinds of diarrhœa which it cures quickly. Pains in the limbs, which are evidently increased by moving, and which may be assumed to exist from the animal's reluctance to move, indicate *Bryonia*.

References.—*Pages* 66, 76, 96, 98, 101, 102, 103, 104, 141.

Calcarea Carbonica. (*Carbonate of Lime.*)

Foals of delicate constitution, with slow teething, are benefited by this medicine. It assists the assimilation of food and growth of tissue when these are defective in "weedy" and unthrifty animals.

References.—*Pages* 40, 134.

Calendula Officinalis.

I have directed the tincture of this drug to be administered internally at the same time with the external application of the lotion (see page 149) in various cases of flesh-wounds, tears, cuts, &c. The two together promote healthy healing by granulation, and aid in preventing the formation of ugly scars.

For external use, *see page* 149.

References.—*Pages* 17, 18, 34, 47, 48.

Cantharis. (*Spanish Fly.*)

This is the foremost remedy when the kidneys, bladder, or generative organs are inflamed, especially when the urine is scanty and bloody, and the animal frequently attempts to

pass urine, straining and evidently being in pain during the act.

References.—*Pages* 74, 77, 78, 79, 83, 84.

Chelidonium Majus.

Its use in veterinary practice is limited to the symptoms of deranged liver, described at page 70.

China. (*Peruvian Bark.*)

Bark is of great value against the weakening consequences of diarrhœa, loss of blood, and loss of the animal fluids generally, including diseases attended with profuse discharge of pus (matter). In chronic diarrhœa attended with wasting and debility, it frequently yields good results.

References—*P ages* 66, 82, 85, 100, 147.

Colocynthis. (*Bitter Cucumber.*)

This drug is mainly used in diarrhœa, and in dysentery with bloody discharges and severe colicky pains. In pure spasmodic colic it is often one of the best remedies, and also in "grass" colic.

References.—*Pages* 64, 66, 67, 68.

Digitalis Purpurea. (*Foxglove.*)

Used in heart affections with irregular and intermittent action, and in dropsical affections depending on this cause.

References.—*Pages* 72, 111.

Drosera Rotundifolia. (*Sun Dew.*)

This drug is sometimes of service in spasmodic coughs worst in the evening or during the night, which exhausts the patient.

Reference.—*Page* 107.

Euphrasia. (*Eyebright.*)

Good results are obtained from this drug in certain cases of inflamed eyes, when there is a copious discharge of acrid tears, increased vascularity of the visible parts of the eye, attended with swelling of the eyelids, and gluing of their edges. It is still more clearly indicated when these symptoms are accompanied by a free discharge of watery mucus from the nostrils.

Reference.—*Page* 119.

Ferri Sulphas. (*Sulphate of Iron.*)

This drug renders excellent service when the appearance and condition of the animal are degraded by worms. It corrects the disorder of the mucous membrane of the intestinal canal, and thus renders the latter part an unfit and barren habitat for parasites.

References.—*Pages* 59, 60.

Ferrum. (*Iron.*)

Indicated in cases of indigestion and mal-assimilation, weakness, loss of condition, and discharge of undigested oats, &c.

Reference.—*Page* 53.

Hepar Sulphuris. (*Sulphuret of Lime.*)

This drug is suitable for rough, hoarse coughs depending on irritation of the larynx, and for catarrh of the windpipe lower down.

It is of great value in promoting the formation of matter, and helping its passage to the surface, and in these respects finds a large field for employment in veterinary practice.

References.—*Pages* 21, 45, 47, 83, 84, 103, 147.

Hydrastis Canadensis.

This plant has a marked action on mucous membranes, and therefore will often give satisfactory results in discharges from the vagina or urethra, and in healing languid or unhealthy ulcerations.

In nasal gleet, I have seen it produce marked benefit in a short time, given internally, and used as an inhalation.

For external use, *see page* 151.

References.—*Pages* 83, 84, 85, 90, 92.

Iodium. (*Iodine.*)

There are some rare cases of profuse staling (page 75) which yield to iodine, after resisting the other remedies mentioned under that heading.

Ipecacuanha.

This drug is prescribed at page 67 for some of the symptoms of dysentery. It is also sometimes useful against quick and obstructed breathing, loud rattling of mucus in the air-passages, and suffocative cough.

Kali Bichromicum. (*Bichromate of Potash.*)

This drug is indispensable in the treatment of chronic discharges from the nose, and has proved more useful than any other for these troublesome cases. In glanders and farcy, when the constitution is not thoroughly broken down, it acts well, healing the nasal ulcers, and improving the general condition. In weed and cellulitis, with or without the previous use of *Aconite*, it alone suffices to cure quickly. In purpura hæmorrhagia, I consider it a specific. In dispersing swelling of the legs, and getting unthrifty animals into good condition and looks, it is rivalled only by *Arsenic*.

For local use, *see page* 150.

References.—*Pages* 91, 92, 98, 139, 144, 145, 146.

Kali Chloricum. (*Chlorate of Potash.*)

Used chiefly in aphthous eruption in the mouth, and on the lips.

For local use, *see page* 151.

Reference.—*Page* 44.

Kreosotum.

I find this remedy valuable in the kind of cough described at page 107.

Mercurius Corrosivus. (*Corrosive Sublimate*).

In veterinary practice, this drug has a somewhat extensive sphere of action. In a multitude of cases of bony deposits, such as splints, spavins, &c., I have used it internally and externally with the very best results. I say the same with respect to bursal enlargements, and capped hocks, when chronic and the tissues hard and dense. I say the same, again, when we have to deal with the deposits and adhesions of sprains of ligaments. It quickly cures quittor, one of the most intractable diseases of the horse; but if used, as it often is, too strong, it does harm. Most forms of diarrhœa and dysentery, especially when attended with violent straining and discharges of blood, yield to it.

For local use, *see page* 150.

References.—*Pages* 21, 23, 24, 27, 35, 74, 119, 122.

Mercurius Vivus.

This drug is used in certain cases of aphtha, inflammatory affections of the mouth and tongue, in non-mercurial salivation and ranula, alternately with *Belladonna;* it quickly cures inflammation of the parotid and

inflammatory sore throat. In certain stages of jaundice and inflammation of the liver, its use will be necessary. In strangles, and in catarrhal discharges from the nose and eyes, as well as in ophthalmia, good results follow its administration.

References.—*Pages* 17, 44, 45, 47, 48, 50, 66, 68, 69, 70, 72, 83, 84, 85, 89, 91, 92, 96, 132, 147.

Nux Vomica.

This is another of the most frequently used drugs in veterinary practice. It is required in paralysis of the tongue, lips, and face, and is of signal value in almost all states of derangement of the digestive organs, as shown by foul tongue, loss of appetite, constipation, &c. Certain forms of colic, characterized by the symptoms described at page 64, are quickly cured by it. Coughs depending on stomach disorder, a very frequent affection in the horse, call for its employment. Tetanus is another disease in which *Nux vomica* may have to be given.

References.—*Pages* 46, 53, 55, 57, 60, 61, 64, 66, 72, 74, 75, 78, 79, 85, 96, 107, 110, 114, 116, 119, 130, 141.

Opium.

Prescribed at page 55 for the comatose symptoms of "staggers," and at page 80 for the symptoms of abortion.

Phosphorus.

Amongst the diseases affecting the horse, this drug is limited in use almost entirely to those in which the lung is inflamed, whether this condition occurs in its pure form, or, as usually happens, in association with bronchitis or with pleurisy. In the stage of consolidation it is remarkably successful.

References.—*Pages* 96, 101, 103.

Phytolacca Decandra.

This is one of the "new American remedies," and has a high reputation in the United States in the treatment of inflammation of the mammary gland of women. I have no doubt, judging from the results of an extensive trial, that it is equally efficacious when the corresponding organ of the equine, bovine, and canine races is attacked with inflammation, and inflammatory enlargement and induration.

Reference.—*Page* 82.

Podophylin.

Prescribed at page 72 for certain symptoms, there given, of deranged liver.

Pulsatilla. (*Pasque-flower.*)

Prescribed at page 81 for retained placenta.

Rhus Toxicodendron.

I employ *Rhus* internally and externally with good results in distension of bursal sacs, such as thorough-pin, wind-gall, &c., and in sprains of ligaments, after *Arnica*. It is also useful in some cases of chronic rheumatism.

For external use, *see page* 150.

References.—*Pages* 24, 27, 114, 130, 132, 141.

Secale Cornutum.

Prescribed at pages 81 and 82, for abortion and retained placenta.

Silicea.

I always give *Silicea* in open joints, in poll-evil, and in diseases of bones. It appears to me to have an undoubted

power in controlling suppuration and in healing up abscesses.

References.—*Pages* 21, 41, 83, 84, 92.

Stannum. (*Tin.*)

Prescribed at page 108, for spasm of the diaphragm.

Sulphur.

This drug is useful in catarrhal and in chronic inflammation of the eyes. I always give it to finish off the treatment of acute lung and bronchial diseases. It does good in constipation, pure and simple, alternated with *Nux vomica*. There are several kinds of skin disease which disappear under its use.

For external use, *see page* 151.

References.—*Pages* 62, 98, 101, 102, 119, 129, 130, 141.

Tartarus Emeticus. (*Tartar Emetic.*)

I have seen this drug act well in bronchitic cases, attended with loud rattling, quick breathing, and loose cough.

Reference.—*Page* 98.

Terebintha.

Prescribed at page 77, for bloody urine.

Thuja. (*Arbor vitæ.*)

Prescribed at page 134, for warts.

MEDICINE-CHEST.

Chests of various sizes are made up containing supplies of the medicines suitable for homœopathic practice. My numerous correspondents in all parts of the world frequently provide me with instances of their success in treating their horses and cattle, without the delay of sending long distances for a veterinary surgeon. They have medicines on the spot, and as soon as illness breaks out, they at once apply the remedies. Emigrants intending to farm or breed would find it to their advantage to provide themselves with a good medicine-chest, the cost of which would soon be repaid in the saving of stock. Gentlemen colonists in Canada, Natal, and Australia, have informed me that they have saved many hundreds of pounds by being their own cattle-doctor.

In addition to medicines, a few small horns, a trocar, a drawing-knife for the feet, some sewing-needles for wounds, &c., should be purchased.

In some parts of the country a very useful scheme has been successfully started. A few farmers join together and buy a large medicine-chest. A small payment is made by each in order to keep up the supply of medicine. As often as may be necessary, the members get what they require from the box. An association of this kind, especially if worked by intelligent and energetic men, effects a large amount of good to the individual members.

The chest should be in a dry place, and not be exposed either to too great heat or too great cold. Great care should be observed to put the right cork in the right bottle. The proximity of strong-smelling substances is objectionable. With such common-sense precautions, the medicines will preserve their efficacy for a long period.

SENDING FOR THE VETERINARY SURGEON.

1. Send as soon as the horse is observed to be amiss. A serious attack may be thus nipped in the bud, life saved, and a protracted illness prevented.

2. Send a written rather than a verbal message, and give the name and address in full. Delay and errors may thus be prevented.

3. Do not send a frantic message for the veterinary surgeon to come "instantly" in a case about which there is no pressing hurry.

4. Send early in the day, if possible, rather than wait all day, and then send last thing at night.

5. In writing, give a few plainly expressed statements as to the symptoms, so that the veterinary surgeon may take with him such instruments and medicines as he may think necessary.

6. In writing about a horse at a distance that cannot be personally examined, a full report of the supposed causes, the symptoms, and the previous treatment, should be given. For this purpose, the remarks at page 9, under "Examination of the Patient," will afford material assistance.

MANAGEMENT OF SICK HORSES.

1. Housing.

In acute disease, such as colic, laminitis, inflammation of the lungs, the sick animal should be placed in a clean, well-ventilated, roomy box, provided with a sufficiency of clean straw. Were a griped horse to remain in a stall, he would not fail to injure himself more or less seriously, whilst tossing about during the violence of the pain he suffers.

In contagious diseases, such as glanders, &c., the sick should be separated from the healthy, to prevent, as far as possible, the extension of the malady.

In tetanus, the least noise throws the muscles into spasm, greatly intensifies suffering, and thus hinders recovery; in this disease, therefore, the animal should be removed at once to a box, apart from other horses, and light excluded.

The box should be well ventilated, and air admitted without draughts, especially in lung affections.

Dirty and damp litter should be frequently removed, and replaced by clean straw, cut short.

2. Clothing.

The quantity of clothing required depends on several circumstances. A woollen rug suffices for cart-horses. High-

bred horses need a hood, woollen bandages to the legs, &c. In hot weather, a linen sheet will be generally enough. When the coat stares and the surface feels cold to the touch, the clothing must be proportionately increased in quantity. Comfortable clothing is specially required in all diseases attended with weakness and prostration of the vital powers. In colic, mad staggers, inflammation of the bowels, it will be hardly possible to keep clothing on, owing to the patient's violence. In all cases, the golden mean between too much and too little should be hit.

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3. Food.

Water.—In febrile diseases, frequent draughts of cold water are very agreeable to sick horses by relieving thirst. One or two quarts are sufficient at a time, repeating this quantity as often as may be judged necessary. Many horses will take and relish pure cold water when other fluids are refused.

Rice-Water.—This is prepared by gently boiling one pound of the best rice in eight quarts of water for about two hours. The whole should then be strained through a sieve, and the liquid used as a cold drink three or four times a-day in quantities of one or two quarts at once.

Hay-Tea.—Boiling water is to be poured upon a quantity of hay, free from dust and not mow-burnt. The vessel is then covered up, until it becomes cold, when it is strained and then to be offered. Equal quantities of milk and hay-tea form an agreeable, nutritious drink for sick horses.

Milk.—This is much relished by most ailing horses, and is of great use in weakening diseases attended with loss of digestive power. Skim-milk is better than unskimmed, and it may be given pure, or diluted with water, according to the

intention of the giver. Two quarts, three or four times a-day, is the average quantity required in most cases. Bran or oil-cake is sometimes added to make a malt. It is supposed to have amatory properties, and hence is sometimes given to stallions in the covering season.

Linseed-Gruel.—The linseed should be slowly stewed or boiled, taking care it is not burnt. It is not suitable for febrile conditions, but is highly nutritious and restorative after acute illness, and is believed to relieve irritating coughs. The addition of a little salt, or about an ounce of sugar, makes it more agreeable and appetizing.

Oatmeal-Gruel.—Mix one pound of meal with a gallon of water, and boil gently, stirring the while, until the whole becomes thickish. The meal should not settle to the bottom and leave the water clear. This gruel, when not given too cold nor too thick, is much liked by sick horses, and by those who refuse solid food after severe exertion, or a long journey. Some horses prefer oatmeal and linseed gruels mixed. A little salt and some milk are good additions.

Barley-Jelly.—Barley carefully boiled in water until it is quite soft, and made sufficiently thin with the addition of water, and perhaps a little milk sometimes, is much relished by high-bred horses, sick from acute, debilitating, or chronic diseases. It is less suitable where there are active febrile symptoms remaining. Or, the barley may be separated from the liquor by straining, and the latter given as a diluent, and somewhat diuretic drink.

Bran Mash.—This is the staple food for a sick horse. A cold mash is made by simply pouring upon bran as much cold water as it will absorb. The warm mash is prepared by using boiling water, and covering the vessel containing it with a thick cloth until it is cool enough to be swallowed. In some cases it is advisable to add boiled oats to the mash, as bran by itself has little nutriment. Bran mashes are laxative, and therefore hurtful in disease attended with

purging. Boiled linseed in a bran mash is supposed to be good for a horse with cough.

Hay.—This should be given to sick horses in sparing quantities, both during the actual illness and for some time afterwards, until the digestive power returns with convalescence. It should be carefully withheld when the tongue is covered with a soapy fur, and the smell of the mouth unpleasant. The hay must be thoroughly good and sweet.

Carrots.—This is one of the best kinds of food a horse can get, either in health or in sickness. At first, they increase the flow of urine and the action of the bowels, but these effects soon pass off. Carrots are highly beneficial in chronic cough, broken wind, diseases of the skin, &c., and help to bring a weak and unthrifty horse into good condition. After acute illness is over, and convalescence is fairly entered upon, they are excellent, either alone, or along with a moderate quantity of oats. They may take the place of grass, and be given to an idle horse instead of corn.

Carrots should be washed, well sliced, and given in the raw state; they are then relished more keenly than if they are boiled or steamed.

Malted Barley.—Barley is steeped in water or moistened, and spread out in a layer until it germinates (or sprouts). This food is useful during convalescence from prostrating disease, and whenever the strength is reduced and the powers of life feeble. It is generally much liked, and horses will take it when they refuse everything else.

Bread.—White or brown wheaten bread, at least a day old, may be offered to a sick animal in small quantity, when it is desirable that he should eat, and nothing else tempts his appetite.

4. Poultices.

Poultices provide moisture and warmth to a diseased part; by these two properties they relax the tissue and relieve the tension caused by inflammation, and thus moderate pain. In doing this, they often suffice to arrest inflammation and check the tendency to the formation of matter. When the parotid gland is inflamed, or the glands under the jaws are similarly diseased, or the skin is bruised and torn, as in broken knees, poultices are of great value. They also expedite the passage of matter to the surface, and lessen surrounding inflammation, when the suppurative process is already established. They should be applied as hot as can be borne, and therefore should be sufficiently large to retain heat and moisture for some hours; they should be changed once or twice a-day, according to circumstances, and be so applied that they are kept close to the skin. For the feet, leather boots are made to receive the poultice; and for the leg, nothing is better than a footless stocking, secured with a tape below, stuffed gradually with the poultice, and surrounded at the top part with a loosely-fitting tape. Tight tying and undue pressure are to be avoided.

One of the best of poultices is composed of bran and turnips. The latter should be well boiled first, bran thoroughly intermixed, and then the mixture applied at a proper temperature to the part; we thus get a soft, bland, pliable, and clean application, which retains moisture and heat for a longer time than poultices of other materials. When turnips cannot be had, bran, with the addition of lard or oil, will answer instead of the above. Boiled oatmeal, of proper consistency, makes a good poultice.

Medicated poultices are made by adding *Arnica Tincture* for injuries, in quantity proportioned to the extent of damage, to one of the simple poultices, pouring it on the surface immediately before application. *Calendula Tincture*

may be used in the same manner for wounds. Charcoal, mixed up uniformly with bran and turnips, or sprinkled chiefly on the surface of the latter poultice, is a useful application in foul-smelling conditions, as in grease, thrush, &c. Yeast poultices sometimes do good in foul and sloughing sores. They are made either by making a dough with yeast, water, and flour, applying the poultice whilst fermentation is going on, or by smearing the surface of a common bread poultice with yeast.

The horse will have to be tied up when he tears the poultice off with his teeth, as he often does, and shackled when he paws and kicks it off.

5. Fomentations.

These, like poultices, furnish heat and moisture to an injured or inflamed part, and have the same action in controlling inflammation and assuaging pain. They have the treble advantage, however, of being less heavy, more easily applied, and not chafing tender parts.

The water used should be as hot as the human hand can safely bear, and as the lot cools, fresh quantities should be in preparation, so as to keep up a constant supply of a nearly uniform heat.

In fomenting the leg, the horse's foot must be placed in a pail, or a shallow tub, the limb from the shoulder downwards swathed in a piece of flannel, or part of an old blanket, and hot water poured out of a pitcher upon the top part of the wrapper.

For fomentations to do their utmost good, two things are necessary—a plentiful supply of hot water, and continued application of it for at least one hour.

Poultices, when necessary, should be put on immediately after fomentation is completed.

Fomentations, medicated with *Arnica*, are of great use when applied to the legs of hunters, racers, roadsters, or other horses, after hard work or a long journey. Two ounces of tincture should be added to two gallons of water, as hot as can be comfortably borne. A sponge soaked in this application should be carried from the knees and hocks down the legs, one after the other, for about ten minutes to each limb. If possible, two men should divide this operation between them. Of course, mud, if there be any, should be first removed. When the fomentation is over, the legs should be wrapped in dry flannel bandages. This treatment prevents or relieves the swelling of joints and sheaths of tendons, so apt to follow hard work in some horses.

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6. Disinfection.

If the disease is attended with foul smell, as in ozæna, abscess of the lungs, &c., or if a stench arises from discharges from any part of the body, or from the decomposition of dung, urine, &c., a disinfecting powder, such as M'Dougall's, should be sufficiently dredged on the floor.

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7. Bandaging.

Bandages of flannel, in stripes about four inches broad and four to five yards long, are useful applications when the legs are cold and damp. They should be removed as soon as dryness and warmth are secured, and the legs hand-rubbed afterwards.

Wet bandages—that is, stripes of calico soaked in cold water, and in some cases in Arnica lotion—are of great service in preventing and lessening swelling, and averting the tendency to inflammation around tendons, so common after hard work.

Bandages should be rolled round the leg evenly and not tightly; they are seldom carried above the knees and hocks; and the tie at the end should be securely arranged.

8. Injections or Clysters.

The main use of injecting water into the rectum is to unload that part, and to excite the action of the bowel higher up. To effect the latter object, it is necessary that the fluid be injected slowly, and in large quantity, in order that the gut may be fully distended and vigorous contraction provoked. In some cases, the contents of the rectum should be first removed, either by the gentle introduction of the hand, or by warm water injected quickly so as to excite rapid contraction. When the rectum is thus emptied, slow injections may now be applied high up the intestine for the relief of colic, spasm of the bladder, &c. In these cases, injections are internal fomentations, besides removing mechanical causes of irritation.

Water may be used warm, or hot, and with or without soap. For the relief of pain in the bowels, or in parts contiguous to the rectum, the water should be as hot as can be safely borne.

In acute or chronic diarrhœa, attended with rapid sinking and wasting, starch, as thick as cream, and heated to about 100° Fahr., should be used as an injection. It soothes irritation, sheaths a sore surface, and restrains discharge. A common syringe filled will be enough for one injection, repeated two or three times a-day; a larger quantity would probably come back.

9. Bleeding and Blistering and Purging.

In ancient times, medical treatment was summed up in these three "ings."

Bleeding consisted in the abstraction of from two to four gallons of a fluid called blood, the existence of which in an animal is believed to be necessary to that animal's existence.

Blistering during the dark ages was mostly performed by plastering mustard on a sick horse's windpipe, throat, and sides. This material was supposed to preserve horse-flesh; but the prevailing idea is that it is good with beef. It may be applied, with equal advantage, to the walls of the stable and to those of the horse's thorax. If used to the latter, its efficacy may be greatly increased by instantly washing it off.

Purging was a favourite pastime amongst our forefathers. As soon as they saw a horse ill, they never rested till its entrails were flushed like a modern sewer. Horses don't seem to think this sort of thing funny.

Of late years, "we have changed all that," as the French say, with three results: — Disease is deprived of three powerful allies; sick animals are not subjected to gross cruelty; and owners of horses have heavier pockets.

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10. General Hints on Nursing.

A good nurse is he, who carefully watches how the horse speaks by looks, movements, and general demeanour—who can put a right meaning upon these different acts—and who can intelligently and kindly render the varied services which these acts solicit. I was recently attending a tetanic horse, and knowing the dreadful suffering caused by noise, I urgently instructed the groom to be as quiet as possible. But he clanked the pails, slammed the doors, made as much noise with his clogs as a nigger in a jig, and generally conducted himself not like a good nurse, but like a rascal in training for the "cat."

The appearance of new symptoms, or any variation in the old ones, during an attack of illness, should be noted and reported to the owner, or to the attending vet., and the directions of the latter with respect to medicine, diet, clothing, exercise, &c., should be faithfully carried out. The temperature of the skin and of the mouth, the state of the breathing, the character of the cough, the appetite, the fæces, urine, discharge from the nostrils, are the main objects for a nurse's observation.

Amongst the little acts which a good nurse should perform, and which soothe and refresh an ill horse, are hand-rubbing the legs previous to the readjustment of bandages, gently wisping the body over night and morning when disarranged clothing is put right, wiping the nostrils and dock with a damped sponge, coaxing the patient to eat a bit of grass or hay, or a carrot presented with the hand; and when convalescence is fairly entered upon, changing the horse to another box, when possible, so that he may enjoy the companionship of his mates.

ON UTILIZING "SCREWS."

A FEW hints on the best way to manage old or defective horses, and to get as much work out of them as they are capable of, may be useful to many persons.

OLD HORSES.—Horses above ten years, or thereabouts, are seldom able to perform long journeys without distress and exhaustion, but many can do a fair day's work, if judiciously handled. They should be liberally fed on the best oats and hay, and have occasional allowances of malt and carrots. The food should be crushed or cooked when the teeth are bad; and if there be defective chewing, the teeth should be examined, and projecting edges rasped down, if necessary. Old carriage-horses that have been tightly reined up, become stiff and rigid in the neck, and sometimes have difficulty in feeding, if they are turned out to grass.

BLINDNESS.—A horse with defective or lost sight may still prove a serviceable animal. They do harness work well, especially if put in the wheel of a four-horse coach. When one eye only is lost, the horse should be harnessed to the side he can best see from. As a rule, blinkers should be abolished. Many hunters perform ably with but one eye. Blind horses are not safe for night work; they should not be turned out to grass; nor should they be stalled near a biting or kicking mate, seeing that they cannot get out of reach or otherwise defend themselves from attack.

DELICATE FEEDERS.—Some horses refuse their feed after a run, or a long journey. They have to be tempted, and their appetite piqued, by offering them dainty food, such as oatmeal gruel, with or without milk; a bit of bread; pieces of carrot; a handful of dry oats, or malt. *Nux vomica*

in 10-drop doses should be given three times a-day until the natural appetite returns.

Broken Wind.—The capacity of a broken-winded horse varies with the extent of the defect. Usually, they can manage a journey of a few miles without distress, provided they are not pushed too fast. Some, when slightly affected, are able to go with hounds, but they must be carefully dieted and ridden. All such horses do best with regular work or exercise, a full supply of oats, beans, and barley, and a small quantity of fodder. Hay is not so good as wheat straw—about eight pounds a-day. Carrots also are of use. They should be kept short of water before a journey; but may have the usual quantity at night. Bad qualities of any sort of food are peculiarly hurtful.

Roarers.—These are often quite fit for short stages, or slow work. When put to harness, the bearing-rein should be discarded. A full meal before a journey is an evil and a burden. The work should be done on a stomach empty, or nearly so. The first part of a journey should be done slowly, and plenty of time taken up-hill and with free head.

Megrims.—Horses that have had one attack of this affection are apt to have more. They are unfit for saddle purposes, and should be used only for slow work in double harness. They should have regular work or exercise, and be fed on laxative rather than on binding food. The bearing-rein should not be used. As soon as the animal staggers, he should be pulled up, and allowed to stand till he recovers.

Loss of Rest.—Some horses sleep standing, or lean against the travis, or drop on their knees and snatch a few minutes' nap. Others are loth to lie down, owing to a stiff back, which makes getting up difficult or impossible without help. Others, again, remember having been halter-cast, and refuse to lie down whilst the head is fastened. Such animals should be left free in a roomy box, or put down after Rarey's plan. If these fail, slings should be used.

HINTS ON STABLING, GROOMING, FEEDING, ETC.

1. Dimensions of Stable.

The height of the stable from floor to ceiling should be about twelve feet. Each stall should measure six feet in width and nine in length, and there should be a space of three feet between the end of the stall partition and the wall for gangway or passage. The partition dividing one stall from another should be about seven feet at the head end and six at the other. In some stables the manger is not fixed against the wall, as is usually done, but at a distance of three feet, leaving a passage in front of the horses' head from which they are fed. This arrangement is thought by some to facilitate ventilation and lighting; but it cannot be carried out where space is of consequence. The number of stalls in each stable should not, if possible, exceed eight.

2. Floor.

This requires the greatest attention, in order to guard against accumulations of ordure and soakage of urine. Dampness is fatal to health and often to life also. Bricks are bad materials for the construction of floors, as they easily chip or crack, especially where the horses are heavily shod,

and then allow the urine to pass through. Square pieces of stone, or Dutch tiles, are amongst the best, as they wear well and are close-fitting. The floor should incline slightly upwards towards the head end, so as to provide for the fall of urine and of water used in washing, into the drains. Too great a rise is hurtful, as the back tendons are kept on the stretch, and the animal perhaps lamed in consequence; or he hangs backwards on his chain, and gets punished for his bad habit.

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3. False Bottoms.

These ought to be adopted. They have been in my stables for years. A brief account of how to construct them must suffice here. Take four pieces of oak, each as long as the stall, two inches thick and four broad; lay one of them lengthwise from manger to heel close to the partition of the stall, another in the same position at the other partition, and the other two down the centre of the stall, two feet apart, so as not to interfere with the urine channel. Then, on these four supports, nail securely cross boards of elm, each six inches broad, two thick, and half an inch apart from each other. The bottom thus made should fit the stall easily, so as to admit of being taken up without unduly fatiguing the groom, when it is necessary—as it often is—to thoroughly cleanse and wash both the bottom and the floor under it. Or, better still, the bottom might be constructed in two equal halves, easily lifting up, and fitting firmly when down. Instead of placing this bottom on the floor as commonly made, the ground might be previously sunk and prepared in such a manner as to admit the wooden framework on a dead level. A false bottom saves straw, furnishes a warm and dry place for bedding, and helps to keep the air free from stinks.

4. Drains.

The urine should run into a channelled gutter in stone down the centre of each stall, ending in a broad groove, which runs the whole length of the stable. Under this should run the main drain, with sufficient width and fall, for the collection and conveyance of the urine, into a reservoir placed on the outside of the stable. This reservoir must not be placed near a well, and should be emptied as often as may be necessary. At the end of each stall partition there should be fixed an iron grate in the broad groove, so as to allow the urine to flow into the drain underneath. Some of M'Dougall's disinfecting powder should be sprinkled on the surface channels daily, and washed into the underground drain; thus, the air of the stable can be kept quite sweet and free from pungent ammoniacal smells. The drain pipes should be fitted closely and cemented at the joints to prevent leakage, and be well trapped to stop back stench.

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5. Litter.

All dirty bedding, manure, &c., should be at once removed from, and not piled up in, the stable; because they soon decompose and give off nasty gases, which are as bad for horses as for the children and others who swarm in what are called "dwelling-houses" over stables, in London mews. The refuse should be dusted freely with the disinfecting powder, which prevents or retards decomposition, and keeps off flies in summer. It should be deposited as far as possible from the stable, and removed at least once daily from the doors of London stables.

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6. Lighting.

Dark stables, like dark houses and rooms for human beings, are decidedly injurious to horses' health; even plants are pale and sickly where light is deficient. Besides, want of light encourages neglect of cleanliness, which means accumulation of filth, breeding of disease, and a foul and suffocating air. "Scrutator" thinks, that the want of plenty of light "often causes horses to shy, if it is not the primary or sole cause of this failing." He adds, "There can be no wonder that horses kept in badly-ventilated and dark stables should be subject to ophthalmia and bad eyes; the only wonder is, that they can see at all, when suddenly emerging from such dens into the broad glare of day."

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7. Ventilation.

Letting impure air out and pure air in without draughts, lies at the root of ventilation, and is essential to vigorous health. There are many plans for securing these ends—all very scientific, most very expensive, some quite useless. The simplest is the best. Ventilating bricks should be placed near the ceiling, not directly in front of the animal's head, but in that part of the wall just above where the stall partition is fixed. On the outer side of the frame a piece of thin leather is nailed at the top, whilst the lower part of the leather is left free and movable. The foul air passes through this opening from the stable to the outside air, the entrance of cold air from the outside to the stable being barred by the leather valve shutting down on the opening. In this way, currents of cold air are prevented from blowing in on the horse's head, as is too often the case, with the result of diminishing the risk of diseased eyes, coughs, sore throat, and other evils. Pure air is admitted through similar ventilating

bricks placed near the ground on the opposite wall behind the horse. The size and number of these simple contrivances for ventilation depends on the size of the stable, and the number of the horses in it. There should also be sky-lights and swing windows, which can be opened for thorough ventilation when the horses are out at work or exercise.

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8. Temperature.

This depends on several circumstances, as, for instance, race-horses generally need more warmth than cart-horses. The warmth of an air fouled and spoiled by being repeatedly breathed, is more hurtful than a cooler, but pure air. In summer, the temperature is regulated by seeing that the ventilators are numerous enough and in good order—not stuffed up with hay or dirty rags. In cold weather, warmth should be secured by extra clothing, rather than by shutting up every crevice and making the air hot, and unfit for its office. Burning gas soon makes air unduly hot, and unfit for breathing purposes. Horses living in close hot stables are very liable to catch cold, and to contract glanders. "Scrutator" justly remarks—"I had much rather keep a horse in a barn during the winter months, with good warm clothing, than in such a place as common stables; and I am quite satisfied he would enjoy better health, and be less liable to catch cold, or subject to diseases of any kind, and would do much more work, than any hot-house plant."

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9. Loose Boxes.

Wherever several horses are kept, a loose box is a desideratum. Space permitting, they are better than stalls in all cases. A box should be about eighteen feet long, sixteen

wide, and twelve high; it should, like stalls, be well floored, drained, and ventilated. The floor should incline slightly towards the middle, so as to allow urine to flow away into the drain below. Gas brackets, nails, and projecting bodies in general are objectionable, as the inmate of a box might get at them and be suffocated or hurt. If possible, the box should be at some distance from the stable, thereby insuring isolation in case of contagious disease appearing, and quietude and freedom from noise in all cases of illness. Loose boxes are especially useful for hunters, as after hard work they can rest comfortably in any position, and move about at will.

10. Duties of Groom.

These usually begin at half-past five, or six in the morning. Sometimes the groom must be in the stable much earlier, and sometimes he need not be there before seven. It depends on the time the stable is shut up at night, the work there is to do in the morning, and the hour at which the horse is wanted. When the horse is going out early and to cart work, the man should be in the stable an hour before the horse goes to the road. In general he arrives about six, gives the horse a little water, and then the morning feed of corn. When the horse is eating his breakfast, the man shakes up the litter, sweeps out the stable, and prepares to dress the horse, or take him to exercise. In summer, the morning exercise is often given before breakfast, the horse getting water in the stable, or out of doors, and his corn upon returning. In winter, the horse is dressed in the morning, and exercised or prepared for work in the forenoon. He is again dressed when he comes in; at mid-day he is fed. The remainder of the day is occupied in much the same way: the horse receiving more exercise and another dressing; his

third feed at four, and his fourth at eight. The hours of feeding vary according to the number of times the horse is fed. Hunters are usually fed five times a-day during the hunting season. The most of saddle-horses are fed only three. The allowance of corn for all working horses should be given in at least three portions, and when the horse receives as much as he will eat, it ought to be given at five times. These should be distributed at nearly equal intervals. When the groom is not employed in feeding, dressing, and exercising the horse, he has the stable to arrange several times a-day, harness to clean, some of the horses to trim, and there are many minor duties which he must manage at his leisure. The stable is usually shut up at night about eight o'clock, when the horse is eating his supper.—*Stewart.*

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11. Watering.

Water should be offered to the horse three or four times a-day, the first time as soon as the groom enters the stable. The first draught should measure about two gallons; the quantity per diem cannot be stated, as this depends upon so many variable circumstances. Some stables are furnished with a cistern kept constantly partly filled with water, so that the horse can drink when he likes. When he is not regularly watered at proper intervals, and is then allowed to satisfy his thirst when the stomach contains much food, or the body very hot, there is a serious risk of disease being excited. Too much water before severe work is obviously injurious; the opposite plan of giving none at all when horses are going out hunting is equally open to condemnation. After heavy work, or hard galloping, the chill should be taken off the water by adding about a quart of boiling to two gallons of cold water. A handful of oatmeal in two quarts of water forms a suitable drink when harness or saddle

horses temporarily rest in the course of a long journey. Hard spring water is less fit for horses than soft or river water. It should not contain organic impurities, which it is apt to do if drawn from the vicinity of ditches, drains, manure-heaps, or cesspools.

12. Dressing.

The proof of dirt and dried perspiration having been properly removed, is seen in a shining coat, which does not soil one's hand when the skin is stroked. Dirty horses should, if possible, be washed and cleansed in a clean room apart from the stable, so as to keep the latter free from dust. When a horse is heated and the weather cold, cleaning should not be performed out of doors; this practice is less objectionable when the weather is warm. When the legs are dirty, instead of turning on a lot of cold water, whilst the horse is standing tired and shivering, the best plan is to use a brush and cold water in summer, lukewarm in winter, and a little soap; next, to dry well with a coarse cloth; and then put on woollen bandages to prevent chill. The skin, when damp with perspiration or rain, should be first scraped, rubbed dry with a large wisp, and lastly covered with clothing. After a hard day's work, the chief object is to get the horse dry and comfortable, with as little delay as possible, so that he may have undisturbed rest. Washing horses all over with warm water after hunting is a very common practice, and has its advantages. More than one man, however, is required to do it effectually and safely, and to prevent the risk of serious disease appearing from insufficient drying and chill.

13. Exercise.

Exercise is necessary to keep horses in good health and condition. When a horse is not regularly worked he should have his lungs and muscles exercised and kept in good order, by being taken out every day. Two hours a-day are enough. Walking, and an occasional trot, after the horse has been out a short time, accomplish all the purposes of exercise. Horses that are kept in the stable after regular hard work are very apt to suffer from colic, acute founder, and weed. This is especially true of cab and cart horses, which often fall ill through resting altogether on Sundays, and being fed as if in full work.

The horses of elderly gentlemen and of ladies require steady and regular exercise, coupled with food in moderation, the object being to prevent too great freshness.

In warm weather, the best time for exercise is early morning; but when the weather is cold and raw, and when cutting east winds prevail, it is advisable not to exercise until the chilliness of the atmosphere has been moderated by the sun's heat.

Whether exercise should be done in clothing, or out of it, depends mainly on the state of the weather. Too much clothing at any time is unnecessary during exercise.

The groom should exercise when his master has told him to do it; he should avoid "publics" and locomotives; never gallop; and he should dress the horse as soon as exercise is over.

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14. Clipping and Singeing.

For remarks on these points, *see pages* 135, 136.

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15. Horse Perspiring.

When a horse is hot and perspiring, great care is necessary to avoid chill, and its frequent consequences, namely, acute disease of the feet, or of the lungs. No horse should be stabled and allowed to stand still whilst in this state, and when the circulation of blood, excited by work, has not subsided to its natural level of quietness. The animal should be slowly led about until the skin becomes cooler, and the pulse drops down to near its normal number of beats. Afterwards, the usual processes of dressing and feeding are to be performed. Walking, however, to cool down is objectionable when the weather is very cold or wet, and when the horse is already exhausted with hard work; then, he must be put into a comfortable stable, not at all hot and stuffy, and free from currents of air. The body should be well scraped, rubbed dry, and afterwards clad with rugs. The legs should be washed in lukewarm water, swathed in flannel bandages till they become dry, and, lastly, hand-rubbed.

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16. Horse Wetted.

Serious internal diseases frequently arise from ignorance or neglect in dealing with a horse which has been soaked in rain. If left to himself, the evaporation from the wet skin abstracts heat from the body, the skin becomes cooled down, and the blood stagnates in the lungs, feet, or some other vital part. These results are announced by a "shivering fit," which is too often followed by febrile reaction, with such symptoms as hot dry skin, quick pulse, oppressed breathing, languor, &c.

A wet horse should be well scraped, and then rubbed with soft wisps. Two men at least are required, one on each side,

and they must work with a will. Properly performed, drying may be concluded, under ordinary circumstances, in about half an hour. But when there are not sufficient helpers, or the horse is exhausted with his work, the best plan is to scrape the surface quickly, and at once put on rugs and bandages. The clothing checks evaporation of the wet, and too rapid lowering of the animal heat. Two rugs should be used, the upper one being removed as soon as it becomes damp from soaking up the evaporated vapour. The bandages should not remain on after the legs have become dry and warm.

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17. Wet Legs.

There is no objection to washing the legs, but it is absolutely necessary to dry them well afterwards, else rheumatism, swollen legs, grease, &c., are apt to follow. If the legs are not very wet and dirty, washing may be dispensed with. As a rule, grease occurs where the legs and heels have been well washed and trimmed, but either not dried at all, or dried insufficiently. Drying is effected either by wisps and hand-rubbing, or by putting on, immediately after washing, a set of woollen bandages which soak up damp and keep in heat. Bandages, however, must not remain on too long, never all night, for they make the skin tender and apt to become irritated, inflamed, and cracked, when the horse goes out in the wind and wet.

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18. Harness Injuries.

In the case of new horses, whose skin is not used to the contact and friction of harness, excoriations are apt to be produced by the traces, saddle, or collar. A little care will

generally prevent these troubles. If the neck is found to be hot and tender, it should be dressed frequently with *Arnica Lotion*,* and that part of the collar which has pinched the skin cut out or covered with a bit of soft leather. Sometimes small swellings containing a bloody fluid rise on the neck of a new horse after a journey; they require to be opened, dressed with *Arnica Lotion*, and relieved from the pressure of the collar. The same general principles of treatment apply to injuries caused by the pad, traces, or crupper. Saddle-galls often cause much annoyance, but may generally be obviated by slackening the girth without taking off the saddle, as soon as the rider has dismounted. Injuries thus caused are well treated by applications of *Arnica Lotion*. Care should be taken that the saddle is dry when next put on.

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19. Change of Stable, &c.

A change of lodging, or of diet, is often a cause of disease. When a fresh horse is procured, it is well to know how he has been treated during the previous month. Horses that come from a dealer have probably been standing in a warm stable, well clothed, well groomed, highly fed, and seldom exercised. They have fine glossy coats, they are in high spirits, they are lusty, but their flesh is soft and flabby. They are unfit for fast work. They are easily heated by exertion, and when the least warm they are apt to catch cold. But wherever the horse has come from, or whatever be his condition, changes in reference to food, temperature, and work must be effected by slow degrees. It is absurd and always pernicious to take a horse from the fields, or a straw-yard, and put him in a warm stable, and on rich food all at once; it is not less

* See list of external applications, page 149.

erroneous to take him from a warm to a cold stable, or to demand exertion to which he has not been trained. (*Stewart.*)

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20. Conditioning.

What is meant by the word "condition" will be best understood by briefly sketching two pictures, the first of a horse not in condition, and the second, of one in that desirable state.

This good-looking animal is owned by a horse-dealer. His coat is sleek and shining. You touch the surface of the body, and find it soft and flabby; it is padded with fat, which hides the outline of both ribs and muscles. Out of stable, he jumps about, kicks up his heels, and overflows with buoyant restlessness. Ridden or driven, he needs neither spur nor whip, but starts at once at a free pace, as if he could and would go for hours. Presently, however, he begins to lag, puff, and sweat freely, and before very long his pretensions are at a discount. When stabled, frothy perspiration continues to exude from his melting carcase, and drying the skin is found to be no easy task. He has been fed up for some weeks in a warm stable, without proper exercise, to make him fit to catch the eye of a buyer. Unless the purchaser be wary, change of stable, diet, and work, will cause a host of evils, perhaps death from disease, to crowd on this frisky fat animal. He is in "condition," truly—for sale, but not for work.

The second animal is in the hands of a good groom, and by consequence his looks betray the workman. He is smart and clean, but not surcharged with fat. You observe that he has ribs and muscles. You feel the latter firm and solid. His health and vigour make him playful, but there is no folly in his prancing. He settles down to work calmly and steadily, and keeps at it with good pace, and more power in

reserve. Considering distance and speed, no undue fatigue, quick breathing, or sweat appears. The skin is damped with watery perspiration, and quickly dries. Such a horse is also in condition—for work.

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21. Getting into Condition.

This is effected by the proper regulation of diet and of exercise, and by proper arrangements in the stable with respect to ventilation, grooming, &c. The objects are to get rid of undue deposits of fat, to strengthen muscle, to improve the wind, and then to place the animal in the most favourable condition for giving enduring or speedy service to his owner—"seasoned," in short. With cart, harness, and saddle horses who do not perform severe or long-continued exertion, no great amount of preparation for work is required. Many, indeed, are put to work at once, and injury seldom ensues, unless the work is fast or excessive. When this is the case, the horse is observed next day to be stiff, dull, and unwilling to move, and he rapidly loses flesh, unless the labour is reduced. The right way is to make the pace slow, the distance short, and the weight not too heavy at first, and gradually to increase afterwards in proportion as strength and condition are gained. The great evil is beginning too early with too much work.

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22. Conditioning Hunters.

The best plan of managing hunters after the season is over, is to turn them into paddocks furnished with sheds well strawed. The usual time to do this is the end of April or the beginning of May. The shoes are removed, the feet dressed as far as may be necessary, and perhaps "tips" put

on. The food should consist of grass during the day, hay at night, and two or three feeds of good old sound oats per diem. At about the beginning of August the hunter is brought up to be prepared for the ensuing season. Exercise is one of the main agents, walking at first in the morning time for about two hours, and afterwards trotting him out slowly, alternating with the walk. The body is well clad with clothes and hood, to induce action of the skin. For this purpose a Turkish bath—which should be part of every hunting and racing establishment—answers well. The usual dressing in the stable, feeding with oats and about eight pounds of hay a-day—half in the morning, half at night—are matters of course. At a later period, the exercise of trotting is continued longer or quicker, in proportion to the circumstances of each case. In some cases, the horse is kept from his morning's work, and sent to cub-hunting. The food of a hunter in work should be from 8 to 10 pounds of hay, equally divided at the morning and evening meal; and from 12 to 16 pounds of the best oats in four equal quantities. One or two handfuls of beans may sometimes be added. The administration of aloes, or what in stable language is called "physic," "courses of physic," "preparing for physic," &c., was once universally, and is still partially, considered as the *sine qua non* of successful conditioning of hunters. Many elaborate and "scientific" reasons have been advanced to justify this practice, and many learned explanations of its mode of operation have been given. The best and truest is that of the late Professor Dick,—"The first ball was said to stir up the humours, the second to set them moving, and the third to carry them off —which it generally did by carrying off the horse as well." This opinion is as sound to-day as it was when I heard it uttered thirty-six years ago.

My own plan is to give 10 grains of the first trituration of *Arsenicum* night and morning in a handful of mash. If

the bowels are confined, and the fæces coated with mucus, I give the same dose of *Nux vomica* instead, stopping it and resuming the former when the discharges become natural. The results are all that can be desired.

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23. Food.

Food is required to build up the frame in young subjects, and afterwards to repair the wear and tear of the tissues resulting from use, and to maintain the heat of the body at a nearly uniform standard. Hence a good food consists of such materials as can be appropriated to these purposes.

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24. Oats.

This forms the staple article for horse-feeding. Oats contain 14 parts of tissue-formers and 68 of heat-producers in 100. They should be heavy, thin in the husk, thick in the kernel, dry, sweet to smell, and clean. Dusty, damp, musty, light oats are comparatively worthless as food, and very frequently generate indigestion, diabetes, and other disorders; they are therefore dear at any price. The quantity required varies with work and size. A horse 15 to 15½ hands high, not a greedy feeder, and doing light work or exercise, will need about 10 lbs. of oats per diem, divided into four equal quantities; with heavier work the quantity should be increased up to from 16 to 18. Draught-horses of large size get from 16 to 24 lbs. Oats should be mixed with a small proportion of cut straw or hay, in order to promote mastication and admixture of the food with saliva. Under ordinary circumstances the best mill for crushing oats is the horse's grinders, but it is advisable to give oats ready crushed and mixed with chop when the animal is a greedy

feeder and does not chew thoroughly. No more oats than the quantity sufficient for a day's use should be bruised at a time; otherwise, they turn sour, and are refused, or do injury.

25. Beans.

Beans contain 30 parts of tissue-formers and 51 of heat-producers in 100. The Lincolnshire tic is the best variety; it is small, thin in the husk, heavy in the kernel, and ought to be dry, old, and free from the perforations of grubs. Beans by themselves are bad; they should be mixed in various proportions, depending upon work, &c., with oats and chaff. Great watchfulness must be exercised in giving them for the first time to young or poor horses; otherwise, skin disease, cracked heels, acute disease in the feet, &c., may be caused. Horses at rest should have no beans at all. New beans are so much poison. All beans should be crushed more or less.

26. Peas.

These are rather more nutritious than beans, and more digestible. They may occasionally be given instead of beans, and in like proportions, with advantage.

27. Indian Corn or Maize.

This corn contains but a small amount of nutritious matter, viz., about 12 parts in the 100. It is more suitable for oxen, pigs, &c., than for horses. If it should be used for the latter, beans or peas should be added.

28. Hay.

The nutritious materials existing in hay vary in proportion from 6 to 14 per cent. The quantity required per diem varies with many circumstances, such as the size of the animal, the quality and amount of other food he may get, the nature of his work; it therefore ranges from 8 to 12 pounds. It should be old, clean, and of a sweetish odour. Soft, damp, musty, or "mow-burnt" hay, is pernicious, and the prolific cause of diabetes, indigestion, cough, broken wind, and other troubles. Chopped hay is often given mixed with oats, either whole or crushed; this plan promotes mastication, and saves uncut hay from being pulled out of the rack and destroyed.

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29. Straw.

Amongst cart, cab, and omnibus horses, cut oat straw may be usefully substituted for hay when the latter is dear.

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30. Bran.

This is a nourishing and appetizing food. Two pounds, mixed with a little oats and linseed into a mash with boiling water, and taken when warm, forms a very desirable change in the food of hard-worked horses, when given once a-week, especially on the Saturday night. Bran has a laxative property, and is therefore advantageous in preventing constipation or accumulation when much dry food is allowed to horses severely worked. Bran alone, in the form of mashes, is much used as sick diet in acute diseases instead of corn, which is then too stimulating.

31. Linseed.

Linseed contains a large quantity of heat-producing matter from having much oil in its composition. It both fattens the animal and keeps the bowels open. It is usually given mixed with other things. An occasional allowance of this substance improves the appearance of the coat. A mixture of oatmeal and linseed gruels is often much relished by sick horses.

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32. The Locust or Carob Bean.

This is largely used in the preparation of condiments. It contains very little tissue-forming material, but a large proportion of heat-producers, in the shape of sugar, &c. It has to be split, or ground, before being used. A pint of the ground locust is sufficient to mix with the ordinary feed. When taken it soon causes the horse to take on fat, and makes the coat glossy.

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33. Barley.

This food contains more tissue-forming material than oats, and about the same amount of heat-producers. It is easy of digestion, and is of great utility when mixed with other articles of diet. Both boiled and malted barley are excellent for patients suffering from debility or convalescing from acute disease.

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34. Lentils or Tares.

These are both nutritious and digestible. They have a slightly bitter taste, for which reason they are objected to

by most horses. But when mixed with oats, or barley, or chops, this repugnance soon disappears.

35. Green Food.

Under this head are included the different varieties of grasses, vetches, clover, &c., as well as roots, such as carrots, turnips, and potatoes. The former class must be used with care and judgment, since, as they contain much water and little real nutriment, they are apt, if given too freely to hard-working horses, to lower condition. Used properly, they are often of benefit in sickness, especially when given with a little hay. When a horse is laid up in summer through need of temporary rest, lameness, or some other cause, green food is particularly suitable. Carrots are much relished by both well and ailing horses, and are nutritious and appetizing. All roots should be washed clean, and turnips peeled.

36. Short Rules for Feeding.

1. Give small quantities of food often, rather than large quantities seldom. 2. Feed regularly at stated times; when this is impossible, the "nose-bag" comes in fitly. 3. Regulate the kind and amount of food with the work to be done and the animal's state. 4. Feed at least two hours before starting on a long journey. 5. After a hard day's work, give first oatmeal gruel, and, after dressing, oats and hay moderately. 6. Give none but the very best food that money can buy.

WHAT TO DO AFTER HUNTING.

As soon as the horse reaches home after hunting, the bridle should be taken off, and the girths slackened, the saddle being allowed to remain on a little while. About half a bucketful of nicely made oat-gruel (see page 168) should be at once placed before him. Cold water is objectionable, but small quantities of lukewarm water may be allowed if there is much thirst. The groom then rubs the head and ears with a cloth, or a hay-wisp, and hand-rubs them till they are dry and warm. Whilst the horse is eating a little hay, or a feed of oats, the legs are getting washed with a sponge soaked in lukewarm-water. This soothes the joints and tendons, and prevents subsequent tenderness and swelling in these parts. Two men at least should be thus engaged. In some cases, the knee-bucket is the best plan of applying warm water to the legs. Dry flannel bandages are then to be loosely rolled round the limbs up to the knees and hocks; they must be removed as soon as the legs are dried, and then hand-rubbing applied for a short time. The groom must look for, and if necessary and possible remove, thorns sticking in the legs, stones in the feet, &c. *Arnica Lotion* (see page 149) should be rubbed in, if the legs are grazed or injured in any way; it is also a valuable application for the soreness of leg which exertion causes. After the legs are finished, the body must be wisped dry and warm, by a groom on each side, followed by the usual clothing. The thorough "dressing" and

polishing of the surface must be put off till next morning, since a tired and exhausted horse should not be pestered with useless attention. What he wants is to be made dry, warm, and comfortable, that he may the better enjoy sleep and rest, and recuperate his spent energies. Nothing is more grateful to a tired hunter than being put into a well-ventilated, quiet, thickly-strawed loose box, in which he can lie and move about as he likes—so different from a cribbed and confined stall, with no choice of position, and close and noisy from the presence of other horses. Next morning, the work of grooming is thoroughly performed, and the legs and feet again examined. The legs will perhaps be somewhat hot and swollen, the appetite not keen, and there may be some stiffness in moving. Walking exercise for ten or fifteen minutes will help to remove languor and fine the legs—if it should not do the latter, *Arnica Lotion* should be rubbed in night and morning. Thin oatmeal gruel is the best drink, and carrots or boiled barley when there is costiveness—or oats, if the bowels are right.

Besides mere muscular soreness, and leg scratches, there are two or three more serious matters connected with hunting that deserve attention.

If the joints and tendons remain tender and swollen in spite of the usual treatment as above stated, it will be necessary to put on wet bandages, soaked in *Arnica Lotion*, which must be repeatedly applied, so as to keep the bandages constantly wet. But the improper, or too long continued use of this treatment, may do more harm than good.

Sometimes a thorn penetrates deeply into the skin, and its presence is not suspected for some time, until it causes a small tender swelling, and perhaps slight lameness on first coming out of the stable. In this case, a bandage dipped in *Arnica Lotion* should be rolled over the injured part. The extrusion of the offending thorn will be facilitated by the use of poultices, made as directed at page 170.

When a horse is *excessively* fatigued after long or fast work, whether in saddle or harness, he is dull and listless, hangs his head, eats nothing, or but little, the pulse and breathing are more or less quickened, the eyes red, the mouth hot and dry, the ears and legs cold, &c. *Aconite*, in 10-drop doses, every hour or two, works wonders in a short time, as I have seen in hundreds of cases. He should be placed in a well-littered loose box or wide stall, and be fed on carrots, bran-mashes, gruel, hay-tea, boiled barley, malt, &c., and *gradually* return to his usual fare, as the irritation of the system subsides and appetite returns. If he does not lie down at night to rest, there is reason to suspect lung mischief brewing or brewed.

Another class of symptoms indicate *Catarrh*. The animal has got a "chill." He is languid, refuses his feed, feels cold on the skin to the touch, the coat stares, the breathing is slightly quickened, and he gives an occasional snort or cough, or a mixture of the two. These symptoms may run on to bronchitis or pneumonia (see page 97), but they are in most cases quickly checked, if taken in time, by giving *Aconite* as directed above. Warm clothing, pure air, and proper diet are of course necessary.

Congestion of the lungs, however, is the most serious evil —the horse is said to be "blown," "overmarked," &c. The symptoms of this condition may come on in the field, when the hunter is pushed to his full speed. The breathing becomes quick, short, and difficult—so much so that the nostrils are widely distended; the head is frequently poked out as if a slacker rein were needed. If the horse is not at once pulled up, the breathing becomes still more distressing, the animal's movements irregular and staggering, and at last he may drop exhausted or dead. Of course, no sportsman keeps on the back of his "overmarked" hunter. No, he dismounts, turns the wide nostril to the cooling wind, slackens the girths or removes the saddle, and, as soon as the

immediate distress is over, takes the horse to an airy stable, puts on warm clothing and bandages, gives occasional draughts of slightly "chilled" water, and, above all, keeps the windows open for the admission of *cool* air. As soon as possible, 10 drops of *Ammonium causticum* should be administered, and repeated every half-hour, hour, or two hours, according to the violence of the symptoms.

In other cases, the "overmarked" symptoms are less prominent than in the foregoing example, and are probably first observed after the horse has been stabled, by the breathing being quick and oppressed, the pulse feeble, the eyes injected, head held low, food and drink refused, &c. Here, too, warm clothing to the legs and body, cool air, and *Ammonium causticum*, as above, are the remedies.

In all these instances, there is a risk of acute disease being set up, but my experience tells me that bleeding and over-physicking simply help to kill, or directly kill, whilst the treatment just laid down very rarely fails to stop mischief on the threshold.

"Sore shins" result from fast work on hard ground, and attack both hunters and racers. The front part of the metacarpal bone from the knee to the fetlock is hot, tender, and swollen, the membrane covering that part being inflamed. Unless checked, deposits of bone are formed. The treatment consists in rest, the use of *Arnica Lotion* in the first stage, and, when bony matter is thrown out, rubbing in *Mercur. cor. Lotion*, and giving a dilution of the same drug inwardly, as directed at page 23.

For remarks on "Delicate Feeders," *see page* 176.

ON THE TENDING OF BROOD MARES AND FOALS.

PARTICULAR attention is required towards the end of gestation in brood mares, especially with reference to food, since foaling usually occurs at a season of the year when the yield of grass is but scanty. Swedish turnips well washed and cut into thin slices, and carrots, are liked, and are suitable. Bran mashes, with a dash of bruised oats, may be given every day for two or three weeks before the time of expected foaling. Boiled barley and steamed potatoes are likewise relished and nutritious. Boiled mangold-wurzel has the reputation of increasing the secretion of milk, but, on the other hand, it has laxative properties, and therefore, if given, should be given with a regard to this effect. A little salt is a palatable addition to these foods. When Lucerne or early grass can be had, the allowance of the foregoing substitutes must be proportionately curtailed.

In very bad weather, and also at night, the brood mares should be placed in the shed, but at other times the paddock is best suited for them, so that they may have enough room to take what exercise they like. The floor of the shed is covered with straw in sufficient quantity to afford a warm and soft bed.

After foaling, the mare should be kept quiet in the shed and attended to only by the man who has had previous care of her. A bucket of warm gruel is the best

food to begin with, and for three or four days the chill should be taken off the water. Bran-mashes, with a small quantity of bruised oats, are also advantageous, unless the foal should be attacked with diarrhœa. On the third or fourth day, both mare and foal may be allowed admission to the paddock, provided the weather be not clearly against this step. For the troubles that may attend or follow foaling, the reader is referred to pages 81-82.

Very young foals require to be carefully guarded against rain and cold, and especially so in the early morning or in the evening. On the other hand, "coddling" is baneful. When the weather is favourable, the foal, as a rule, may go into the paddock, the best time being mid-day. The action of the bowels mainly depends on the properties of the mare's milk as influenced by her food; hence if the food consists chiefly of hay and corn, constipation may result in the foal; and if of soft vegetables, we may find purging in the latter. The diet of the mare must therefore be regulated according to these circumstances; but if this does not succeed, the remarks on "Constipation" at page 61, and on "Diarrhœa" at page 65, should be consulted. When the time arrives for giving the foal corn, it should be supplied at first in the bruised state, mixed with a little bran, placed in a low manger, whilst the mother at feeding-time is tied up at her own.

Towards the end of April, the foal, along with its dam, should be turned out into a large field, and have a feed of oats in the morning, and another at night, when brought into the paddock.

Weaning takes place in autumn, the exact time being determined by the existing condition of both foal and dam; the rule is at the end of six months. The foal is turned out, or shut up alone, out of hearing of its dam, else the former will refuse to eat, and the latter will become fretful. Once or twice a-day they meet again, in order that the one may not suddenly lose its natural food, and that the other may

have the udder emptied in the natural way. If the foal should fall ill, or die, the udder must be stripped night and morning for a few days, and the diet reduced. The appearance of heat or tenderness in the udder, and general febrile excitement, call for the treatment laid down at page 82.

The first winter is a trying time for foals. It is especially then that they require good feeding and careful general supervision. A starved and neglected foal grows up into a poverty-stricken "weed," with bad shape, light carcass, and poor quarters. It will be sufficient to say, without entering into unnecessary details, that the food should comprise the most nutritious sorts, such as bruised or boiled oats, boiled linseed, &c., and that it should be varied from time to time, the one object being to supply sufficient material for all the requirements of growth and development.

But matters may not run this smooth course always.

The foal may run the risk of being starved or underfed, by the mare being put to slight work or too much work, soon after delivery, as is often the case on farms. The milk, it must be borne in mind, becomes poor and scanty with work, and therefore both mare and foal must have better care in proportion to their obvious necessities. It is "penny-wise and pound-foolish," to work one with the simple result of starving both.

The mare may not allow the foal, especially a first one, to suckle. In this case, she must be patiently and kindly soothed, and held by the head, with a fore-foot up, till the foal gets enough. It may be necessary to do this several times a-day for the first week, after which there is no further trouble. If the mare is naturally (or unnaturally) vicious, and offers to kick when the foal attempts to suckle, the best plan is to put on the twitch; but this is allowable only when gentler measures fail. After suckling has taken place a few times, the mare usually makes up her mind to recognise the novelty.

Sometimes it happens that the mare falls ill, or has inflamed udder, or dies, and then the foal must be supported with cow's milk. This is done by sucking new warm milk from a pail, as calves do; or by placing one's hand in the pail of milk with the fingers turned upwards. The foal will lick the fingers, and thus lap up the milk. A feeding-bottle constructed after the fashion of those in use for children, but of course larger, is one of the best means. Another is a tube with one end in the basin or jug holding the milk, and the other end placed in the foal's mouth. Cow's milk should be diluted with one third of boiled water, and sugar added, so as to get a food approximating the mare's milk in composition. Two teaspoonfuls of finely powdered sugar to a pint of diluted milk, is about the proper quantity.

SHORT NOTES ON HORSE-BUYING.

In purchasing a horse, the first essential is to keep clearly in mind for what special use and kind of work he is wanted —whether as hack, hunter, or for carriage purposes—and to select an animal qualified by size, general conformation, and relative proportion, to do what his owner requires. For example, an undersized horse is not fit to pull a heavy carriage, nor to carry a "Sir Roger." A horse with a big heavy head badly "set on" to the neck, rides heavily on the rider's hand, and is apt to stumble, especially if the withers are also low, the shoulders thick, and the chest wide. When a horse has a heavy carcass and shows want of bone below the knee, he soon comes to grief and the ground when put to work. Long or hollow backed horses are weak at work, and unable to bear much weight; whilst short-backed ones are unsuited for ladies. Horses required for speed and power should possess deep and wide quarters. A great deal more might be said on these points, did space allow. The novice should be guided in his selection by an expert, able to put the right horse in the right place, and to estimate how far it is safe to strike a balance between the good qualities and the defective points that exist in every average horse.

The vagaries of buyers are sometimes amusing. Every one wants a perfect animal, an ideal of beauty, without fault or flaw, and a jack-of-all-trades. The horse they are in quest of must be $15\frac{1}{2}$ hands high exactly, and 5 years old to

an hour. He must go well with hounds, be a clever fencer, and up to 18 stone. He must be able to carry a timid lady, take out an elderly gentleman for an airing in the Row, pull a brougham in the Park, and cart coals in the country. He must look without wincing at an overloaded tramway car, or the wandering abode of Punch and Judy, and be deaf as a post when a screaming locomotive rushes overhead, or the Guards' band is attacked with a fit of music at his heels. He must be bay in colour, with black points, carry his head and tail well, and have good action. A small white star, in the very centre of the forehead, would be a recommendation. An Irish horse not objected to. He must be perfectly sound and free from vice, and warranted so. The price must not exceed £30 sterling—*pounds*, not guineas.

A buyer who seeks a horse of this description has soon to confess to himself that he knows more about cotton or artificial teeth than he does about horse-flesh. When guided at last to the purchase of a really honest and serviceable animal for a fair and reasonable price, he is rather apt to rue his bargain, either of his own accord, or at the instigation of the knowing friend who never fails to turn up on these occasions. He perhaps discovers that his four-footed servant trips over a boulder, and at once writes an angry letter to the seller, requesting the horse to be taken back, and the purchase-money refunded.

The buyer should first of all inspect the horse at rest in the stable, and he should make his appearance there without previous notice. Thus, he may circumvent a tricky dealer, and discover indications of vice or unsoundness in an animal described as "the best 'orse in London." A refusal to allow this, is usually construed in a sense unfavourable to the owner's description, and puts an end to further negotiations in that quarter.

By adopting this plan, evidence may perhaps be observed of the animal being addicted to certain bad habits, or even

vices. For instance, he may be caught crib-biting, or wind-sucking, or weaving, or he may give a "chronic cough." It is not likely that a dealer would show a horse with the well-known apparatus for crib-biting on at the time.

If the horse is a biter or a kicker, the groom, on going up to or handling him, will be seen to dodge the animal's heels and mouth, and manifest a decided objection to being converted into jelly against the boskin. The way in which the horse conducts himself whilst being dressed before coming out, having his legs lifted up, &c., should be carefully watched.

Observe, also, how the horse stands or moves about in the stall. One of the legs may be "pointed," or advanced in front of its fellow; or the leg may be "knuckled over," or flexed at the fetlock joint. If both fore-feet are tender, the horse throws his weight off them, by placing his hind-feet well under the body; whilst, if the hind-feet are tender, the converse position is assumed, the fore-feet being placed under the body, and the front part thrown forwards. Uneasiness and shifting of the weight from one limb to another likewise indicate pain. Stiffness, lameness, or uneven action should be watched for as soon as the horse turns in his stall to be led out. For, in these cases, the pain may be forgotten, and the lameness temporarily disappear, when the horse is frightened by the groom's switch or the dealer's whip.

It is usual with a certain class of dealers to ply the whip before an old or sluggish horse is brought out of the stable, with the object of making the animal so afraid of further punishment, that he forgets his aches and disabilities, and frisks about with apparent ease and agility. The alarmed, apprehensive expression on the horse's face is quite sufficient to distinguish between the spirited movements of vigorous health and those which the lash has stirred up in a languid "screw."

Lame or groggy horses are sometimes whipped both before

and after they are led out. When trotted before a buyer, the horse is made to quicken his pace and to keep on the move, by a long whip in the hands of a man following behind, or by a short whip in the hands of the man who is running him out. In all such cases, the buyer should at once decline further negotiation.

The horse when brought out of the stable, should be inspected where there is plenty of space and light, and trotted on hard ground. Suspicion is naturally aroused of an attempt to deceive when the whip is plied freely, when the groom shouts and howls when the animal is not allowed to remain still, when the head is held with a short tight rein, &c. At first, the horse should be walked slowly and then trotted slowly, with a free head; and afterwards mounted, and slowly walked and trotted. Speed and wind are subsequently tested by galloping. In some cases, however, slight lameness may disappear by walking, and it is advisable to begin the slow trot at once. When the horse is restless and capering, he should be cooled down and then trotted, before a decided opinion is formed. In other cases, again, where uncertainty is felt, the horse should be put up after an hour's exercise, and again brought out when quieted. There are also some cases of lameness which are not noticeable when the horse goes in a straight line, but become so when he turns round quickly, or is backed.

A man of experience, and of quick perception, has usually no difficulty in soon discovering the particular limb on which a horse is lame; but to the novice this is a conundrum which he has to give up. For the latter's benefit it may be briefly mentioned, that lameness of a fore-leg is attended with "nodding," or the alternate elevation and depression of the head. When the near fore-leg is lame, the moment it comes to the ground the horse *raises* his head and near side of his body to take the weight off that side, and *drops* his head and near side towards the off side, when the weight is thrown on

the sound side; of course, the reverse takes place when the off leg is lame. In hind-leg lameness, the quarter corresponding with the lame leg is raised, and the sound leg and side jerked forwards and downwards; the head "nods" but slightly, unless there be marked lameness. Lameness of both fore and hind legs is more difficult to detect, but the gait is usually short and careful. When both fore-feet only are lame, the lameness is less obvious than when one is affected; there is perhaps no "nodding," but the action is short and low, and the feet are put down cautiously and kept near the ground—hence the term "daisy-cutter."

Sometimes tricky dealers with a horse lame on one leg only make him lame on the other, and thus attempt to conceal the more apparent defect, by putting a piece of wood, or iron, or a stone, under the shoe of the sound foot, or by paring the sound foot at the toe down to the quick, and making the shoe pinch there. These tricks are called "beaning," "wedging," &c. Then the real lameness is disguised, by the horse being compelled to throw an equal weight on both legs or feet. There is, however, a peculiar shifting uneasiness which cannot be mistaken.

In trying a horse, it is not enough that the buyer should see him ridden or driven by the dealer or his man. This should be done by the intending purchaser, who will then be able to ascertain for himself if the horse answers to his manner of riding and handling the reins. A horse should be tried in both quiet and crowded streets, and both by himself and along with other horses. Thus, it may be possible to discover some vice or bad temper, or an awkwardness in action, that may detract from the animal's usefulness, safety, and value. When a horse is a "roarer," a "piper," or a "whistler," the dealer may try to deceive the buyer by the "long trot" trick, which means galloping the horse at some distance from where the buyer is standing, and reducing the

pace on the return journey, so that the animal's breathing becomes comparatively quiet and noiseless.

When the buyer is satisfied with the size, colour, and general appearance of the horse, and likes his action and conduct in the saddle or in harness, a formal examination should be made by a competent and experienced veterinary surgeon, whose duty it will be to say whether or not soundness exists—if there be some technical defect, whether or not it militates against the horse's usefulness or value—and whether the animal's conformation is or is not suitable for the particular kind of work which his owner will call upon him to perform properly. A vet. nominated by the dealer, or engaged in commission business, should be avoided; otherwise loss or disappointment may result. There are dealers who refuse to let an examination be made, except by their own veterinary nominee. The buyer should take especial care to have a thoroughly independent opinion.

But even when every precaution is adopted, an element of risk still remains in horse-buying; for occult unsoundness, or a vice, or a bad habit, may not be discovered for some time after the purchase, or the owner may find out after a few days' trial that the horse does not suit his hand and seat. For instance, such a complaint as staggers or megrims cannot be known as affecting the horse, perhaps for some weeks or even months after he has changed hands.

Hence, after the bargain is completed, the groom should be told to watch for, and immediately report upon, the existence of lameness, vice, blemish, or bad habit, either in the stable or out of doors. It should be borne in mind, however, that some horses become vicious, &c., when they get into a fresh stable, or when put to a different kind of work from that to which they were accustomed before, or are ridden or groomed by a fresh hand; and yet become docile and manageable when the novelty of the situation passes away. The law provides no remedy for vice unless it can be

proved that such vice existed before the date of sale. A careful examination should again be made for the discovery of any unsoundness, vice, or fault, the presence of which would justify the horse's return to the previous owner. If the horse is returnable, no time should be lost, since there is then less likelihood of dispute as to whether or not the cause of unsoundness, &c., existed anterior to purchase.

The buyer is sometimes too much influenced by the reports of his stableman. He may be told that the horse has got the lampas, worms, humours, and a hundred other ill things about him; but he should make further inquiry before he proceeds against the seller; and it may possibly be found that the fault is not in the horse, but in the man who sold him. With unpardonable negligence he has omitted to pay the initiatory fee, and there is nothing wherewithal to christen the poor beast, and to drink long life and good luck to him.—(*Stewart.*)

Buyers often make great blunders in managing a horse after purchase, especially if it has been got from a dealer who cares more to prepare the animal for show than for immediate work. Unless the new purchase is slowly and gradually brought into working condition by proper attention to stabling, feeding, and exercise, the chances are that serious mischief will follow. It has frequently happened that a dealer has been unjustly blamed for selling an unsound animal, and great vexation and expense have been incurred through this error—the fact being that the horse was improperly ridden or driven, or stabled and fed, and disease and death resulted clearly in consequence of the ignorance or folly of the buyer.

Stewart's Cautions.

Never purchase a horse from a friend; nor from a litigious man, nor a petty lawyer; nor from one who cannot pay the expenses of a lawsuit.

Never, before purchase, show that you are exceedingly well pleased with the horse.

Hear all that the seller and his grooms say about a horse; but be certain of nothing till you have ocular demonstration.

Never appear to know any of the tricks of dealers, unless they be attended with cruelty, when it may be proper to discourage and punish them by expressing disapprobation, and refusing to have any transactions with such men.

But never be so rude as to betray any suspicion of want of faith in the dealer. It is always very offensive, quite useless, impolitic, and it may be erroneous.

If you discover an unsoundness or vice before purchase, it is needless to point it out. To say that the horse is too good for your purpose, may serve as well. You need not offend the owner; and you have no right to give the horse a bad character, even when you are quite sure that he deserves it.

Seldom give the price asked. Twenty, or thirty, or even forty per cent., is no great abatement in horse-dealing.

Be cautious when a seller warrants a horse, and at the same time candidly tells you of some defect. A little tenderness produced by a bad shoe, may mean incurable lameness; a slight cough, of no consequence, may signify broken wind or chronic cough; and when it is said the horse is a little troublesome to go about, it may often be concluded that he is notoriously vicious.

When an auctioneer says that the horse is not warranted, but that he will warrant him for a guinea, his offer may sometimes be taken, but on condition that a fair trial be allowed before payment.

Always, when possible, delay payment until the horse has been minutely examined and tried.

Be suspicious when delivery is refused until the price is

paid, or a certain portion of it deposited—that is, when you are known to be credit-worthy.

When a horse has many faults, object only to that for which he can be returned. To object first to the price, then to wind-galls, and last of all to spavin, is to say that, right or wrong, you are determined to break the contract.

To a person of doubtful character never, and to a dealer seldom, return a *paid* horse until the price is refunded. There are men who manage to keep both the horse and the money.

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